Cost Factor =	Value*	Explanation
Instruments (10% of direct) =	10	meters and sensors
Freight (5% of direct) =	5	shipping
Installation (44% of direct) =	. 44	associated piping, electrical equipment, and materials
Startup and Contingency (31% of direct) =	31	spares, bonding, engineering, startup, shakedown, and contingency
Maintenance (5% of capital) =	5	replacement parts and labor
Inspection (1% of capital) =	1	inspection
Electricity Cost (\$0.04840/kwh) =	0.0484	Rolling 12-months ending in March; Average Revenue per Kilowatt-hour from Retain Sales to Ultimate Consumers (Industry). Electric Power Monthly June 2003. Energy Information Administration
Useful Life (10 years) =	10	payment period
Discount Rate (7%) =	7	interest rate
Annualized Factor For Initial Costs for Engineering Controls (14.24% of capital) =	1424	based on useful life and discount rate
Annualized Factor For Engineering Controls Beginning End of Second Year (74.26% of capital) =	•	based on useful life and discount rate
Escalation Factor (1.038) =	1.038	Chemical Engineering Magazine Plant Cost Index or similar (current year/past year)

[•] The cost factor value can be edited and changes will be reflected in all industry sectors

Sector 10. Plastic Colorant Producers and Users. Unit Costs.

Base Cost	Escalation Factor	Unit Cost
\$90.00	1	\$90.00
\$680.00	- 	\$680.00
\$60.00	1	\$60.00
\$400.00	1	\$400.00
\$1,075.00	1	\$1,075.00
\$3.03	1.2702	\$3.84
\$0.07	1	\$0.07
\$1,473.33	1	\$1,473.33
\$243.00	1	\$243.00
\$35.30	1	\$35.30
\$13.74	1	\$13.74
\$1,164.00	1	\$1,164.00
\$1.86	1	\$1.86
\$6.60	1	\$6.60
\$ 32.85	1	\$32.85
\$4.50	1	\$4.50
\$0.58	1	\$0.58
\$0.75	1	\$0.75
\$0.75	1	\$0.75
\$6.00	1	\$6.00
		\$5.00
		\$5.00
		\$2.50
		\$0.24
\$856.00	1.4742	\$1,261.92
\$3,590.00	1.4742	\$5,292.39
\$500.00	1	\$500.00
\$0.50	1	\$0.50
\$0.06	1	\$0.06
\$1,580.00	1,4742	\$2,329.24
\$212.00	1.4742	\$312.53
\$500.00	1	\$500.00
\$282.00	1.4211	\$400.76
\$125.00	1.0000	\$125.00
The second secon		¥120.00
\$150.00	1.4211	\$213.17
\$150.00 \$141.00	1.4211 1.4211	
		\$213.17
\$141.00	1.4211	\$213.17 \$200.38
\$141.00 \$75.00	1.4211	\$213.17 \$200.38 \$106.59
\$141.00 \$75.00 \$2.00	1.4211 1.4211 1	\$213.17 \$200.38 \$106.59 \$2.00
\$141.00 \$75.00 \$2.00 \$1.00 \$25 \$75	1.4211 1.4211 1 1 1 1.4211 1.4211	\$213.17 \$200.38 \$106.59 \$2.00 \$1.00 \$35.53 \$106.58
\$141.00 \$75.00 \$2.00 \$1.00 \$25 \$75	1.4211 1.4211 1 1 1.4211 1.4211 1.4211	\$213.17 \$200.38 \$106.59 \$2.00 \$1.00 \$35.53 \$106.58 \$62.92
\$141.00 \$75.00 \$2.00 \$1.00 \$25 \$75	1.4211 1.4211 1 1 1 1.4211 1.4211	\$213.17 \$200.38 \$106.59 \$2.00 \$1.00 \$35.53 \$106.58
	\$1,075.00 \$3.03 \$0.07 \$1,473.33 \$243.00 \$35.30 \$13.74 \$1,164.00 \$1.86 \$6.60 \$32.85 \$4.50 \$0.58 \$0.75 \$0.75 \$6.00 \$5.00 \$5.00 \$2.50 \$0.24 \$4.10 \$856.00 \$3.590.00 \$0.50 \$0.00 \$0.50	\$1,075.00

Sector 10. Plastic Colorant Producers and Users. Wage Rates.

Section	Non-Supervisory Wage Rate (\$/hour)	Supervisor Wage Rate (\$/hour)	Clerical Wage Rate (\$/hour)	Janitorial Wage Rate (\$/hour)	Bilingual Trainer Wage Rate (\$/hour)
1	\$21.43	\$30.01	\$15.47	\$11.71	\$24.65
2	\$21.10	\$29.54	\$15.23	\$11.53	\$24.27
4	\$31.15	\$43.63	\$22.48	\$17.02	\$35.83
5	\$30.36	\$42.52	\$21.91	\$16.59	\$34.91
6	\$25.72	\$36.01	\$18.55	\$14.05	\$29.57
7	\$31.15	\$43.63	\$22.48	\$17.02	\$35.83
8	\$23.20	\$32.49	\$16.75	\$12.67	\$26.68
9	\$23.24	\$32.55	\$16.77 ´	\$12.70	\$26.73
10	\$25.76	\$36.06	\$18.58	\$14.08	\$29.62
11	\$23.12	\$32.36	\$16.68	\$12.63	\$26.58
12	\$19.14	\$26.80	\$13.81	\$10.46	\$22.00
13	\$31.25	\$43.77	\$22.55	\$17.08	\$35.94
14	\$31.25	\$43.77	\$22.55	\$17.08	\$35.94
15	\$22.80	\$31.92	\$16.45	\$12.46	\$26.22
17	\$30.36	\$42.52	\$21.91	\$16.59	\$34.91
18	\$33.42	\$46.80	\$24.12	\$18.26	\$38.43
19	\$24.10	\$33.76	\$17.39	\$13.17	\$27.72
20	\$16.08	\$22.52	\$11.60	\$8.79	\$18.48
21	\$23.25	\$32.56	\$16.77	\$12.71	\$26.75
22	\$16.79	\$23.50	\$12.11	\$9.18	\$19.30
23	\$17.19	\$24.08	\$12.41	\$9.39	\$19.76
24	\$26.18	\$36.65	\$18.89	\$14.30	\$30.10
25	\$20.65	\$28.93	\$14.91	\$11.28	\$23.76
26	\$25.86	\$36.20	\$18.65	\$14.13	\$29.74
27	\$21.93	\$30.71	\$15.83	\$11.99	\$25.23
29	\$20.04	\$28.07	\$14.46	\$10.95	\$23.05
30	\$22.49	\$31.49	\$16.23	\$12.29	\$25.87
31	\$25.88	\$36.24	\$18.68	\$14.14	\$29.76
32	\$22.21	\$31.10	\$16.03	\$12.14	\$25.55

Sector 10. Plastic Colorant Producers and Users. Engineering Capital.

10. PLASTIC COLORANT PRODUCERS AND USERS						
Alternative PEL (ug/m³)	20					
Affected Job Category	None					
Page						
Required Controls	No Engineering Controls					
CAPITAL*						
Direct equipment (quoted)	\$0.00					
+ Instruments (10% of direct)	\$0					
+ Freight (5% of direct)	\$0					
+ Installation (44% of direct)	\$0					
+ Startup and Contingency (31% of direct)	\$0					
Total Capital	\$0					
ANNUALIZED						
O&M						
Maintenance (5% of capital)	\$0					
+ Inspection (1% of capital)	\$0					
+ Electricity	\$0					
+ Electric motor HP	0					
+ Annual Kwh	0					
Total O&M	\$0					
+ Annualized Initial Costs (14.24% of capital)	\$0					
Total Annualized Cost	\$0					
Rounded Total Annualized Cost	\$0					
ASSUMPTIONS						
+ ACFM	٠,					
+ Length of ductwork, feet						
+ Room size						
+ Other						
DESIGN BASIS						

^{*} Some vendors supplied cost for only the equipment while others supplied the cost for instruments, freight, installation, and indirect costs were essupplying costs for equipment and installation. For those cases where sensors; installation includes associated piping, and electrical equipments.

Sources: (1) Luxme International Ltd., Montreal, Quebec [(717) 764-032!

Sector 10. Plastic Colorant Producers and Users. Engineering Controls by PEL.

10. PLASTIC COLORANT PRODUCERS AND	10. PLASTIC COLORANT PRODUCERS AND USERS							
Alternative PEL (ug/m³)	20							
Affected Job Category	None							
Page	0							
Required Controls	No Engineering Controls							
LARGE PLANT COSTS								
Total Annualized Cost	\$0							
Number of Large Plants	16							
Number of Controls per Large Plant	1							
Percentage of Large Plants with Workers > PEL	37.5%							
Percentage of Large Plants without Control	37.5%							
Total Number of Controls for Large Plants	6							
Annualized Cost to Large Plants	\$0							
SMALL PLANT COSTS								
Total Annualized Cost	\$0							
Number of Small Plants	21							
Number of Controls per Small Plant	1 ·							
Percentage of Small Plants with Workers > PEL	38%							
Percentage of Small Plants without Control	38%							
Total Number of Controls for Small Plants	8							
Annualized Cost to Small Plants	\$0							

Sector 10. Plastic Colorant Producers and Users. Exposure Profile.

Number of Affected Establishments					
Small Establishments (< 20 employees)	45				
Large Establishments (≥ 20 employees)	92				
Total Establishments	137				

Number of Establishments in Industry Sector					
Number of Establishments < 20 employees 53,786					
Number of Establishments 20 - 499 employees	726,182				
Number of Establishments > 500 employees	157.567				

Number of Employees Exposed to Hexavalent Chromium by Job Category in the Plastic Colorant Producer and User Industry							
Job Category	Number of Employees in Large Facilities	Number of Employees in Small Facilities	Total Number of Employees				
Dry Color Handler	303	45	348				
Wet Mill Operator	30	0	30				
Dry Color Blender/Packager	40	. 0	40				
Production Supervisor	74	0	74				
Total	447	45	492				

Job Category	Total No. of Workers		tribution (ug/m:	3)					
		<lod< th=""><th>LOD to <0.25</th><th>>0.25 to 0.5</th><th>>0.5 to 1.0</th><th>>1.0 to 5.0</th><th>>5.0 to 10.0</th><th>>10.0 to 20.0</th><th>>20.0</th></lod<>	LOD to <0.25	>0.25 to 0.5	>0.5 to 1.0	>1.0 to 5.0	>5.0 to 10.0	>10.0 to 20.0	>20.0
Dry Color Handler	348	0	0	0	0	232	35	58	23
Wet Mill Operator	30	0	15	15	0	. 0	0	0	0
Dry Color Blender/Packager	40	0	0	0	0	18	1	6	15
Production Supervisor	74	37	0	0	0	0	0	0	37
Total	492	37	15	15	0	250	36	64	75

Job Category		osure Percenta	ge Distribution (ug/m3)				
	<lod< th=""><th>LOD to <0.25</th><th>>0.25 to 0.5</th><th>>0.5 to 1.0</th><th>>1.0 to 5.0</th><th>>5.0 to 10.0</th><th>>10.0 to 20.0</th><th>>20.0</th></lod<>	LOD to <0.25	>0.25 to 0.5	>0.5 to 1.0	>1.0 to 5.0	>5.0 to 10.0	>10.0 to 20.0	>20.0
Dry Color Handler	0%	0%	0%	0%	66.7%	10%	16.7%	6.7%
Wet Mill Operator	0%	50%	50%	0%	0%	0%	0%	0%
Dry Color Blender/Packager	0%	0%	0%	0%	44.2%	3.3%	15.6%	37.5%
Production Supervisor	0%	0%	50%	0%	0%	0%	0%	50%
Total	0%	10.6%	10.6%	0%	50.8%	7.3%	13.0%	15.2%

Job Category	Plastic Colorant Producer and User CrVI Worker Exposure Cumulative Percentage Distribution (ug/m3)								
	>0.25	>0.5	>1.0	>5.0	>10.0	>20.0			
Dry Color Handler	100%	100%	100%	33.4%	23.4%	6.7%			
Wet Mill Operator	50%	0%	0%	0%	0%	0%			
Dry Color Blender/Packager	100%	100%	100%	56.4%	53.1%	37.5%			
Production Supervisor	100%	50%	50%	50%	50%	50%			
Total	96.9%	86.3%	86.3%	35.5%	28.2%	15.2%			

Sector 10. Plastic Colorant Producers and Users. Engineering Capital Costs - Large Establishments.

Incremental Annua	lized Costs	to Large Pla	stic Coloran	t Producer a	nd User Esta	blishments
PEL (ug/m³)	0.25	0.5	1	5	10	20
No Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0.	\$0	\$0	\$0	\$0

Cumulative Annualized Costs to Large Plastic Colorant Producer and User Establishments									
PEL (ug/m³)	0.25	0.5	1	5	10	20			
No Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0			
Total	\$0	\$0	\$0	\$0	\$0	\$0			

Sector 10. Plastic Colorant Producers and Users. Engineering Capital Costs - Small Establishments.

Incremental Ann	nualized Co	sts to Small F	Plastic Colora	ant Producer	and User E	stablishment
PEL (ug/m ³)	0.25	0.5	1	5	10	20
No Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	\$0	\$0

Cumula	tive Annuali		Small Plastic tablishments	Colorant P	roducer and	User
PEL (ug/m³)	0.25	0.5	1	5	10	20
No Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0 .	\$0	\$0	\$0

Sector 10. Plastic Colorant Producers and Users. Exposure Monitoring Costs - Large Establishments.

Alternative PEL (ug/m3)	N/A	Alternative PEL (ug/m3)	20	10 1	5	1	0.5	ת הפ
Affected Job Category	All	Affected Job Category	All	All	All	All	All	0.25 All
	Exposure		Exposure	Exposure	Exposure	Exposure	Exposure	Exposure
Required Controls	Monitoring	Required Controls	Monitoring	Monitoring	Monitoring	Monitoring	Monitoring	Monitorin
pital		Annualized					. 1	
Number of plants represented by the model input	92	M&O						
Percent of Plants that will		Percent of plants not	į					
continue to use an outside	100%	performing quarterly	100%	100%	100%	100%	100%	100%
contractor for monitoring		monitoring requirements Number of job categories						
Percent of plants already with in- house monitoring capabilities	0%	exposed at or above the	3	3	3	3	3	4
		PEL	ŀ					
Percent of plants that have not satisfied the initial monitoring requirement	25%	Percent of plants that have an employees in at least on job category above the PEL	15%	28%	36%	86%	86%	97%
		i i	1					
Percent of plants that will		Time, in hours, for an outside contractor		-				
develop in house monitoring	0%	(industrial hygiene	12	12	12	12	12	12
capability		technician) to conduct quarterly-annual monitoring						
		quarterry-arrisual monitoring						
Number of initial exposure measurements required to be		Percent of plants not						
satisfied with semi-annual	2	performing semi-annual	100%	100%	100%	100%	100%	100%
monitoring requirements		monitoring requirements						
Number of personal sampling	5	Number of job categories exposed at or above the	2	2	2	0	2	1
pumps required		action level	_	,			_	
		Percent of plants that have						
Number of samples per exposure measurement	3	an employees in at least on	13%	7%	51%	0%	11%	3%
		job category above the AL						
In-house administrative time		Time, in hours, for an						
(e.g., for pump calibration and	0.5	outside contractor (industrial hygiene	12	12	12	. 0	12	12
report writing) per sample, in	0.5	technician) to conduct semi						
hours		annual monitoring						
Cost per hour for an outside industrial hygiene contactor	\$90.00	Useful life, in years, of a personal sampling pump	10	10	10	10	10·	10
• •		Annual O&M cost of a						
Time, in hours, for an outside contractor (industrial hygiene		personal sampling pump						
technician) to conduct the initial	12	as a percentage of capital	10%	10%	10%	10%	10%	10%
monitoring		cost (assumed to be 10% of capital cost)						
		Cost of laboratory						
Total number of job categories	4	processing samples	\$90,616	\$168,117	\$211,637	\$514,486	\$514,486	\$770,23
(covering each work area)		associated with quarterly monitoring	400,010	Ψ100,111	42 11,007	\$014,100	4011,100	4
+		Administrative cost of		1				
Non-supervisory wage rate, \$/hr	\$25.76	associated with quarterly monitoring	\$0	\$0	\$0	\$0	\$0	\$0
Time, in hours, to notify an		, i						
employee of the exposure	0.25	Cost of outside contractor for quarterly monitoring	\$60,411	\$112,078	\$141,091	\$342,991	\$342,991	\$385,1
monitoring results		, , , , , , , , , , , , , , , , , , , ,			,			
Cost of a personal sampling	\$680.00	Cost associated with	\$23,341	\$43,304	\$54,514	\$132,523	\$132,523	\$198,4
pump	4000.00	notifying employees of quarterly monitoring results		\$43,504	ψ04,514	\$102,020	V.02,020	V .00,
Variable cost per sample (e.g.,		Quarterly monitoring	****	*****	* 407 040	\$990,000	#non non	#4 252 7
laboratory analysis)	\$60.00	O&M cost	\$174,368	\$323,499	\$407,242	\$990,000	\$990,000	\$1,353,7
		Cost of laboratory						
Number of work shifts	3	processing samples associated with semi-	\$25,834	\$14,507	\$100,950	\$0	\$21,064	\$2,98
		annual monitoring						
D	***	Administrative cost of	**	\$0	\$0	.\$0	\$0	\$0
Supervisory wage rate, \$/hr	\$36.06	associated with semi- annual monitoring	\$0	•	40	.40	••	•
Number of hours of training		Cost of outside contractor					****	***
required to develop in-house	16	for semi-annual monitoring	\$25,834	\$14,507	\$100,950	\$0	\$21,064	\$5,96
monitoring capability		Cost associated with						
Flat fee for training course	\$400.00	notifying employees of	\$6,654	\$3,737	\$26,003	\$0	\$5,426	\$768
adming course	Ţ-00.00	semi-annual monitoring results	70,004		,			
Number of calibration units		Semi-annual monitoring	# F0 000	400 750	#007 000	••	\$47 EE4	20.74
required	1	O&M cost	\$58,322	\$32,750	\$227,902	\$0	\$47,554	\$9,71
Cost of a calibration unit	\$1,075.00	Total Annualized O&M Cost	\$232,690	\$356,249	\$635,145	\$990,000	\$1,037,554	\$1,363,4
apital cost of exposure monitoring	\$0.00	+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0	\$0
p-front cost of exposure	* 054 440 CC	Total Assualles d Cont	\$990 000	\$356,249	\$635,145	\$990,000	\$1,037,554	\$1,363,4
onitoring	\$251,413.92	Total Annualized Cost	\$232,690	\$350,249	ψυνυ, 140	4350,000	4.,007,004	Į ,,,,,,,,,
		Rounded Annualized Cost	\$232,700	\$356,200	\$635,100	\$990,000	\$1,037,600	\$1,363,

Sector 10. Plastic Colorant Producers and Users. Exposure Monitoring Costs - Small Establishments.

Alternative PEL (ug/m3)	N/A	Alternative PEL (ug/m3)	20	10	5	11	0.5	0.25
Affected Job Category	All	Affected Job Category	All	All	All	All	All	All
Required Controls	Exposure Monitoring	Required Controls	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring
apital		Annualized						Wester
Number of plants represented by	- 45	O&M						
the model input Percent of Plants that will	. 40	Percent of plants not						
continue to use an outside	100%	performing quarterly	100%	100%	100%	100%	100%	100%
contractor for monitoring		monitoring requirements						
Percent of plants already with in-	0%	Number of job categories exposed at or above the	. 5	5	5	· 5	5	5
house monitoring capabilities	V	PEL	_		•	j	ŭ	Ŭ
Percent of plants that have not		Percent of plants that have an employees in at least						
satisfied the initial monitoring	25%	on job category above the	15%	28%	36%	86%	86%	97%
requirement		PEL						
		Time, in hours, for an outside contractor		-				
Percent of plants that will develop in house monitoring	0%	(industrial hygiene	12	12	12	12	. 12	12
capability	0.4	technician) to conduct	12,	' '	12	'-	12	12
		quarterly-annual monitoring						
Number of initial exposure		Percent of plants not						
measurements required to be satisfied with semi-annual	2	performing semi-annual	100%	100%	100%	100%	100%	100%
monitoring requirements	•	monitoring requirements					-	
Number of personal sampling	•	Number of job categories exposed at or above the	2		2			
pumps required	3	exposed at or above the action level	2	2	2	0	2	1
		Percent of plants that have						
Number of samples per exposure measurement	3	an employees in at least on job category above the	13%	7%	51%	0%	11%	3%
exposure measurement		AL						
In-house administrative time		Time, in hours, for an						
(e.g., for pump calibration and	1	outside contractor (industrial hygiene	12	12	12	0	12	12
report writing) per sample, in hours	-	technician) to conduct				-		,-
Cost per hour for an outside		semi-annual monitoring Useful life, in years, of a						
industrial hygiene contactor	\$90.00	personal sampling pump	10	10	10	10	10	10
Time, in hours, for an outside		Annual O&M cost of a						
contractor (industrial hygiene	12	personal sampling pump as a percentage of capital	10%	10%	10%	10%	10%	10%
technician) to conduct the initial monitoring		cost (assumed to be 10%						
		of capital cost) Cost of laboratory				İ		
Total number of job categories	1	processing samples	\$24,624	\$45,684	\$57,510	\$139,806	\$139,806	\$156,978
(covering each work area)	'	associated with quarterly	\$24,024	\$40,004	457,510	\$158,000	\$100,000	\$150,570
,		monitoring Administrative cost of		1				
Non-supervisory wage rate, \$/hr	\$25.76	associated with quarterly	\$0	\$0	\$0	\$0	\$0	\$0
Time, in hours, to notify an		monitoring						
employee of the exposure	0.25	Cost of outside contractor for quarterly monitoring	\$29,549	\$54,821	\$69,012	\$167,767	\$167,767	\$188,374
monitoring results		for quarterly monitoring						
Cost of a personal sampling	****	Cost associated with	***	*** ***	844.044	****	200 040	\$40.42E
pump	\$680.00	notifying employees of quarterly monitoring results	\$6,343	\$11,767	\$14,814	\$36,012	\$36,012	\$40,435
Variable cost per sample (e.g.,		Quarterly monitoring						
laboratory analysis)	\$60.00	O&M cost	\$60,516	\$112,272	\$141,336	\$343,585	\$343,585	\$385,787
		Cost of laboratory						
Number of work shifts	1	processing samples associated with semi-	\$4,212	\$2,365	\$16,459	\$ 0 .	\$3,434	\$486
		annual monitoring						
Supervisory wage rate, \$/hr	\$36.06	Administrative cost of associated with semi-	\$0	\$0	\$0	- \$0	\$0	\$0
ouportion) magoriato, with	\$00.00	annual monitoring]	4.0	••	,,,	*-
Number of hours of training	40	Cost of outside contractor	¢12 e2e	\$7.00e	\$40.270	\$0	\$10,303	\$2,916
required to develop in-house monitoring capability	16	for semi-annual monitoring	\$12,636	\$7,096	\$49,378	ĐU .	φ1U,3U3	₽ ∠,310
		Cost associated with						
Flat fee for training course	\$400.00	notifying employees of semi-annual monitoring	\$1,085	\$609	\$4,240	\$0	\$885	\$125
		results						
Number of calibration units	1	Semi-annual monitoring	\$17,933	\$10,070	\$70,076	\$0	\$14,622	\$3,527
required	\$1.075.00	O&M cost	£70 440	\$100.040	\$ 214 442	\$343,585	\$359.207	\$389,314
Cost of a calibration unit	\$1,075.00	Total Annualized O&M Cost	\$78,448	\$122,342	\$211,412		\$358,207	
Capital cost of exposure monitoring	\$0.00	+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0	\$0
Up-front cost of exposure monitoring	\$32,522.85	Total Annualized Cost	\$78,448	\$122,342	\$211,412	\$343,585	\$358,207	\$389,314
		Rounded Annualized Cost	\$78,400	\$122,300	\$211,400	\$343,600	\$358,200	\$389,300

Sector 10. Plastic Colorant Producers and Users. Regulated Area Costs - Large Establishments.

10. PLASTIC COLORANT PRO		l Areas - Signs a	nd Labels to La	rge Establishme	ents	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
	Regulated	Regulated	Regulated	Regulated	Regulated	Regulated
Required Controls	Areas - Signs	Areas - Signs	Areas - Signs	Areas - Signs	Areas - Signs	Areas - Sign
	and Labels	and Labels	and Labels	and Labels	and Labels	and Labels
Capital						
Number of plants						
represented by the model	92	92	92	92	92	92
plant						
Percent of plants requiring						
additional warning signs	15%	28%	36%	86%	86%	97%
for regulated areas						3.75
Number of warning signs				'		
required for each regulated	2	2	2	2	2	2
area	2	4	2	2	2	2
Number of job categories						
exposed above the PEL	3	3	3	3	3	4
Non-supervisory wage,	*					_
\$/hr	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Unit cost of OSHA-						
regulation warning signs	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84
with mounting materials				·	·	
Useful life, in years, of a	10	10	10	10	10	10
warning sign	10	10	10	10	10	10
Time, in hours, to mount a	0.5	0.5	0.5	0.5	0.5	0.5
warning sign	0.5	0.5	0.5	0.5	0.5	0.5
Total capital cost of regulated	\$1,403	\$2,603	\$3,277	\$7.966	\$7,966	\$11,926
areas - signs and labels	φ1, 4 03	φ2,003	φ3,277	φ7, 3 00	\$7,500	Φ11,520
Annualized						
D&M	•		•	•		
Total Annualized O&M Cost	\$0 ************************************	\$0	\$0 ************************************	\$0	\$0 *1.104	\$0 #4.000
+ Annualized Capital Cost	\$200	\$371	\$467	\$1,134	\$1,134 \$4,434	\$1,698
Total Annualized Cost	\$200	\$371	\$467	\$1,134	\$1,134 \$4,430	\$1,698 \$4,700
Rounded Annualized Cost	\$200	\$370	\$470	\$1,130	\$1,130	\$1,700

Sector 10. Plastic Colorant Producers and Users. Regulated Area Costs - Small Establishments.

20 All Regulated	10 All	5	nall Establishme												
20 All Regulated	10 All	5													
Regulated			•	0.5	0.25										
-		All	All	Ali	All										
Arone Signe	Regulated	Regulated	Regulated	Regulated	Regulated										
•	-		-	Areas - Signs	Areas - Signs										
and Labels	and Labels	and Labels	and Labels	and Labels	and Labels										
45	45	45	45	45	45										
15%	28%	36%	86%	86%	97%										
			33,0	3373	0.70										
		-													
2	•	•													
2	2	2	2	2	2										
1					• .										
5	5	5	5	5	5										
			_												
\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76										
\$3.84	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84										
				i	·										
10	10	10	10	40	10										
''	10	10	10	10	10										
0.5	0.5	0.5	0.5	. 05	0.5										
0.0	0.0	0.0	0.0	0.0	0.5										
\$1 144	\$2 122	\$2 671	\$6.494	\$6.494	\$7,292										
4.,	V2,122	Ψ2,071	ψο, το τ	Ψ0,-10-1	Ψ1,202										
		•													
to.	£0	*	**		*										
· -		• -		* -	\$0 ***										
*				·	\$1,038 \$1,038										
·	1				\$1,038 \$1,040										
	15% 2 5 \$25.76	and Labels and Labels 45 45 15% 28% 2 2 5 5 \$25.76 \$25.76 \$3.84 \$3.84 10 10 0.5 0.5 \$1,144 \$2,122 \$0 \$0 \$0 \$163 \$302 \$163 \$302 \$302	and Labels and Labels and Labels 45 45 45 15% 28% 36% 2 2 2 5 5 5 \$25.76 \$25.76 \$25.76 \$3.84 \$3.84 \$3.84 10 10 10 0.5 0.5 0.5 \$1,144 \$2,122 \$2,671 \$0 \$0 \$0 \$163 \$302 \$380 \$163 \$302 \$380 \$163 \$302 \$380 \$163 \$302 \$380	and Labels and Labels and Labels 45 45 45 15% 28% 36% 86% 2 2 2 2 5 5 5 5 \$25.76 \$25.76 \$25.76 \$25.76 \$3.84 \$3.84 \$3.84 \$3.84 10 10 10 10 0.5 0.5 0.5 0.5 \$1,144 \$2,122 \$2,671 \$6,494 \$0 \$0 \$0 \$0 \$163 \$302 \$380 \$925 \$163 \$302 \$380 \$925 \$163 \$302 \$380 \$925	and Labels and Labels and Labels and Labels and Labels 45 45 45 45 15% 28% 36% 86% 86% 2 2 2 2 2 5 5 5 5 5 \$25.76 \$25.76 \$25.76 \$25.76 \$25.76 \$3.84 \$3.84 \$3.84 \$3.84 \$3.84 10 10 10 10 10 0.5 0.5 0.5 0.5 0.5 \$1,144 \$2,122 \$2,671 \$6,494 \$6,494 \$0 \$0 \$0 \$0 \$0 \$163 \$302 \$380 \$925 \$925 \$163 \$302 \$380 \$925 \$925										

Sector 10. Plastic Colorant Producers and Users. Respirator Fit Testing Costs - Large Establishments.

	Cost of	Respirator Fit-Testing	to Large Establishmer	nts		
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	None	None	None	None	None	None
Required Controls	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing
Capital		-				
Total capital cost of respirator fit-testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized		·				
O&M						
Number of plants represented by the model plant	1	1	1	1	1	1
Percent of plants conducting annual respirator fit- testing in the baseline	46%	46%	46%	46%	46%	46%
Non-supervisory wage rate	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Number of employees requiring annual qualitative fit-testing	126	159	386	386	433	447
Cost of materials per qualitative fit-testing	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Time, in hours, for a technician to conduct one qualitative fit-test	0.25	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be qualitative fit-tested	0.25	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be quantitative fit-tested	0.5	0.5	0.5	0.5	0.5	0.5
Number of employees requiring annual quantitative fit-testing	0	0	0	0	0	. 0
Cost of an industrial hygiene technician contractor per quantitative fit-test	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Number of employees who wear respirators for more then 5 hours/week and who are above the	126	159	386	386	433	447
AL in the model plant ¹ Employee time to complete medical history questionnaire, in hours	0.17	0.17	0.17	0.17	0.17	0.17
Cost of medical history questionnaire	\$35.53	\$35.53	\$35.53	\$35.53	\$35.53	\$35.53
Employee time for medical exam for respirator use, in hours	3	3	3	3	3	3
Cost of a medical exam for respirator use	\$106.58	\$106.58	\$106.58	\$106.58	\$106.58	\$106.58
Percent of employees that will require a medical exam for respirator use	23%	23%	23%	23%	23%	23%
Total Annualized O&M Cost	\$6,518.74	\$8,206.21	\$19,949.18	\$19,949.18	\$22,399.49	\$23,116.09
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0	\$0
Total Annualized Cost	\$6,519	\$8,206	\$19,949	\$19,949	\$22,399	\$23,116
Rounded Annualized Cost	\$6,520	\$8,210	\$19,950	\$19,950	\$22,400	\$23,120

All employees above AL and PEL are required to fill out medical history questionnaire (cost not incurred under medical examinations because this industry has exposure to Cr(VI) for less then 30 days/year and therefore not required to have employees above PEL medically examined)

Sector 10. Plastic Colorant Producers and Users. Respirator Fit Testing Costs - Small Establishments.

10. PLASTIC COLORANT PRODUCERS AND USE	RS				· · · · · · · · · · · · · · · · · · ·	
	Cost of		to Small Establishmer			
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	Моле	None	None	None	None	None
Required Controls	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing
Capital						
Total capital cost of respirator fit-testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized					•	
O&M						
Number of plants represented by the model plant	1 .	1 .	1	1	1	1
Percent of plants conducting annual respirator fit- testing in the baseline	5%	5%	5%	5%	5%	5%
Non-supervisory wage rate	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Number of employees requiring annual qualitative fit-testing	126	159	39	39	44	45
Cost of materials per qualitative fit-testing	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Time, in hours, for a technician to conduct one qualitative fit-test	0.25	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be qualitative fit-tested	0.25	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be quantitative fit-tested	0.5	0.5	0.5	0.5	0.5	0.5
Number of employees requiring annual quantitative fit-testing	0	0	0	0	0	0
Cost of an industrial hygiene technician contractor per quantitative fit-test	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Number of employees who wear respirators for						
more then 5 hours/week and who are above the	126	159	39	39	44	45
AL in the model plant ¹ Employee time to complete medical history	0.17	0.17	0.17	0.17	0.17	0.17
questionnaire, in hours Cost of medical history questionnaire	\$35.53	\$35.53	\$35.53	\$35.53	\$35.53	\$35.53
Employee time for medical exam for respirator		(******
use, in hours	. 3	3	3	3	3	3
Cost of a medical exam for respirator use	\$106.58	\$106.58	\$106.58	\$106.58	\$106.58	\$106.58
Percent of employees that will require a medical exam for respirator use	23%	23%	23%	23%	23%	23%
Total Annualized O&M Cost	\$11,407,79	\$14,360.87	\$3,514.54	\$3,514,54	\$3,946,22	\$4,072.47
+ Annualized Capital Cost	\$0	\$14,500.07	\$0,514.04	\$0	\$0	\$0
Total Annualized Cost	\$11,408	\$14,361	\$3,515	\$3,515	\$3,946	\$4,072
Rounded Annualized Cost	\$11,410	\$14,360	\$3,510	\$3,510	\$3,950	\$4,070

All employees above AL and PEL are required to fill out medical history questionnais (cost not incurred under medical examinations because this industry has exposure to Cr(VI) for less then 30 days/year and therefore not required to have employees above PEL medically examined)

Sector 10. Plastic Colorant Producers and Users. Respirator Protection Costs - Large Establishments.

	Cost of Respira	tor Protection for La	rge Establishments			
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	None	None	None	None	None	None
Required Controls	Respirator Protection	Respirator Protection	Respirator Protection	Respirator Protection	Respirator Protection	Respirator Protection
Capital						
Number of plants represented by the model plant	1	1	1	1	1	1
Percent of the workers using air-supplied respirators	3%	3%	3%	3%	3%	3%
Percent of the workers using full-face respirators	5%	5%	5%	5%	5%	5%
Percent of the workers using half-mask respirators	2%	2%	2%	2%	2%	2%
Percent of the workers using blasting helmet air-supplied respirators	0%	0%	0%	0%	0%	0%
Unit cost per worker for an air-supplied respirator	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33
Number of workers requiring air-supplied respirators because above PEL	0	. 0	0	0	0	0
Number of workers requiring air-supplied respirators because above AL	0 .	0	0	0	0	0
Unit cost per employee for a full-face respirator	\$243.00	\$243.00	\$243.00	\$243.00	\$243.00	\$243.00
Number of workers requiring full-face respirators because above PEL	0	0	0	68	126	159
Number of workers requiring full-face respirators because above AL	0	0	.0	0	0	0
Unit cost per employees for a half-mask respirator	\$35.30	\$35.30	\$35.30	\$3 5.30	\$35.30	\$35.30
Number of workers requiring half-mask respirators because above PEL	68	126	159	318	260	274
Number of workers requiring half-mask respirators because above AL	58	33	227	0	47	14
Unit cost per employee for a blasting helmet air-supplied respirator	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00
Number of workers requiring blasting helmet air-supplied respirators above PEL	0	0	0	0	0	0
Number of workers requiring blasting helmet air-supplied respirators above AL.	0	0	0	0	0	o
Fotal capital cost for respirators	\$4,342.91	\$5,467.14	\$13,290.55	\$26,684.09	\$39,771.54	\$46,681.37
Annualized		·				
D&M Number of shifts per day	3	3	3	3	3 [.]	3
Number of operating days per year	30	30	30	30	30	30
Number of days a respirator filter cartridge may be in use before it must be changed	2	2	2	2	2	2
Cost of replacement cartridges (2 cartridges per mask)	\$13.74	\$ 13.74	\$13.74	\$13.74	\$13.74	\$13.74
Useful life, in years, for an air-supplied respirator	10	10	10	10	10	10
Useful life, in years, for a full-face respirator	10	10	10	10	. 10	10
Useful life, in years, for a half-mask respirator	10	10	10	10	10	10
Useful life, in years, of a blasting helmet air-supplied respirator	10	10	10	10	10	10
Non-supervisory wage rate, \$/hour	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Cost of materials to clean one respirator	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86
Time, in hours, for an employee to clean a respirator	0.167	0.167	0.167	0.167	0.167	0.167
Number of operating days per year that employees above the AL must wear respirators because of process upsets	20	20	20	20	20	20
Total Annualized O&M Cost	\$79,124	\$109,624	\$229,967	\$284,917	\$307,329	\$325,324
+ Annualized capital cost of respirator protection	\$618	\$779	\$1,893	\$3,800	\$5,663 ***********************************	\$6,647
Fotal Annualized Cost Rounded Annualized Cost	\$79,742 \$79,742	\$110,402 \$110,402	\$231,859 \$231,859	\$288,717 \$288,717	\$312,992 \$312,992	\$331,971 \$331,971

Sector 10. Plastic Colorant Producers and Users. Respirator Protection Costs - Small Establishments.

10. PLASTIC COLORANT PRODUCERS AND USERS	Coat of Bassics	tor Protection for Sn	aall Establishments			
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	None	None	None	None	None	None
Required Controls			1		Respirator Protection	
Capital						
•	١ ,		١.,	1 .	1	
Number of plants represented by the model plant	1	1	1	1		1
Percent of the workers using air-supplied respirators	2%	2%	2% 3%	2% 3%	2% 3%	2%
Percent of the workers using full-face respirators Percent of the workers using half-mask respirators	3% 2%	3% 2%	2%	2%	3% 2%	3% 2%
Percent of the workers using blasting helmet air-supplied	1		1			1
respirators	0%	0%	0%	0%	0%	0%
Unit cost per worker for an air-supplied respirator	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33
Number of workers requiring air-supplied respirators because above PEL	0	0	0	0	0	0
Number of workers requiring air-supplied respirators because above AL	. 0	o	0	0	0	0
Unit cost per employee for a full-face respirator	\$243.00	\$243.00	\$243.00	\$243.00	\$243.00	\$243.00
Number of workers requiring full-face respirators because above PEL	0	o	0	7	13	16
Number of workers requiring full-face respirators because above AL	0	o	0	0	0	0
Unit cost per employees for a half-mask respirator	\$35.30	\$35.30	\$35.30	\$35.30	\$35.30	\$35.30
Number of workers requiring half-mask respirators because above PEL	7	13	16	32	26	28
Number of workers requiring half-mask respirators because above AL	. 6	3	23	0	5	1
Unit cost per employee for a blasting helmet air-supplied respirator	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00
Number of workers requiring blasting helmet air-supplied respirators above PEL	0	0	0	0	0	0
Number of workers requiring blasting helmet air-supplied respirators above AL	o	. о	0	0	o	0
Total capital cost for respirators	\$441.24	\$555.46	\$1,350.31	\$2,726.40	\$4,069.17	\$4,778.56
Annualized						
D&M				· ·		
Number of shifts per day	1	1	1	1	1	1
Number of operating days per year	30	30	30	30	30	30
Number of days a respirator filter cartridge may be in use	2	2	2	2	2	2
before it must be changed Cost of replacement cartridges (2 cartridges per mask)	\$13.74	\$13.74	\$13.74	\$13.74	\$13.74	\$13.74
Useful life, in years, for an air-supplied respirator	10	10	10	10	10	10
Useful life, in years, for a full-face respirator	10	10	10	10	10	10
Useful life, in years, for a half-mask respirator	10	10	10	10	10	10
Useful life, in years, of a blasting helmet air-supplied	i			1		
respirator	10	10	10	10	10	10
Non-supervisory wage rate, \$/hour	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Cost of materials to clean one respirator	\$1.86	\$1.86 0.167	\$1.86 0.167	\$1.86 0.167	\$1.86 0.167	\$1.86 0.167
Time, in hours, for an employee to clean a respirator	0.167	0.107	0.107	0.107	0.107	0.167
Number of operating days per year that employees above the AL must wear respirators because of process upsets	20	20	20	20	20	20
Total Annualized O&M Cost	\$4,133	\$5,726	\$12,013	\$14,908	\$16,100	\$17,051
 Annualized capital cost of respirator protection 	\$63	\$79	\$192	\$388	\$579	\$680
Total Annualized Cost	\$4,196	\$5,806	\$12,205	\$15,296	\$16,679	\$17,732
Rounded Annualized Cost	\$4,196	\$5,806	\$12,205	\$15,296	\$16,679	\$17,732

Sector 10. Plastic Colorant Producers and Users. PPE Costs - Large Establishments.

			Establishments	,		
Affected (JP 2)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
	Personal	Personal	Personal	Personal	Personal	Personal
	Protective	Protective	Protective	Protective	Protective	Protective
	Clothing and					
Required Controls	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment
Capital		1		Ì	1	•
Total capital cost of personal protective clothing and equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized						
O&M		İ				
Number of plants represented by the model plant	92	92	92	92	92	92
Percentage of plants in the baseline that supplied coveralls or aprons	70%	70%	70%	70%	70%	70%
Percentage of plants in the baseline that supply eye protection	63%	63%	63%	63%	63%	63%
Percentage of plants in the baseline that supply gloves	70%	70%	70%	70%	70%	70%
Percentage of employers that will pay for coveralls or aprons	ľ					
according to industry practice under proposed standard	88.1%	88.1%	88.1%	88.1%	88.1%	88.1%
Percentage of employers that will pay for eye protection according to	İ		1			1
industry practice under proposed standard	91.9%	91.9%	91.9%	91.9%	91.9%	91.9%
Percentage of employers that will pay for gloves according to industry	ľ				1	i
practice under proposed standard	88.1%	88.1%	88.1%	88.1%	88.1%	88.1%
Type of protective clothing required (PE coated Tyvek coveralls,	uniforms	uniforms	uniforms			
Saranex coveralls, Tyvek coveralls, bib aprons or none)	uniomis	Unitomis	uniforms	uniforms	uniforms	uniforms
The unit cost for coveralls or aprons ¹	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
The annual number of replacements for coveralls or aprons ¹	0	0	0	0	0	0
Total number of PPE laundered per year	583	583	583	583	583	487
Unit cost of laundering one article of PPE	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Total Number of employees at the plant with the potential for dermal	5	5	5	5	5	4
exposure	l ,	1		,	, s	1 4
Type of protective eyewear required (clear indirect vent goggles, clear	clear lens safety	clear lens safety	clear lens safety	clear lens safety	clear lens safety	clear lens safet
iens safety glasses, grey lens safety glasses or none)	glasses	glasses	glasses	glasses	glasses	glasses
Unit cost of eye protection	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Number of replacement during the year for eye protection	19	19	19	19	19	16
Type of gloves required (lined nitrile, powder surgical nitrile, rough	powder surgical	powder surgical	powder surgical	powder surgical	powder surgical	powder surgica
PVC, none)	nitrile	nitrile	nitrile	nitrile	nitrile	nitrile
The unit cost for gloves	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24
Number of replacements during the year from gloves	583	583	583	583	583	487
Unit Cost of Cr(VI) hazard labels for glove disposal bags	\$0.32	\$0.32	\$0.32	\$0.32	\$0.32	\$0.32
Employee time to dispose of a pair of gloves in labeled container, in	1	1 1	1	1	1	1
minutes	l '	' '	l '	'	· '	· '
Total Annualized O&M Cost for establishments that do not supply	\$26,392	\$26,392	\$26,392	\$26,392	\$26,392	\$22,022
protective work clothing and equipment in the baseline	\$20,392	\$20,392	\$20,392	\$20,392	\$20,392	\$ 22,022
Total Annualized O&M Cost for establishments that supply protective	\$4,856	\$4,856	\$4,856	\$4.856	\$4 0EG	\$4.050
work clothing and equipment in the baseline but have employees pay	34,830	\$4,000	34,630	\$4,830	\$4,856	\$4,052
Total Annualized O&M Cost for protective work clothing and equipment	\$31,247	\$31,247	\$31,247	\$31,247	\$31,247	\$26,074
Total Annualized Cost	\$31,247	\$31,247	\$31,247	\$31,247	\$31,247	\$26,074
Rounded Annualized Cost	\$31,250	\$31,250	\$31,250	\$31,250	\$31,250	\$26,070

The unit cost of replacement for coveralls or aprons and the annual number of replacements for coveralls or aprons is zero because the unit cost of laundering

Sector 10. Plastic Colorant Producers and Users. PPE Costs - Small Establishments.

		ipment for Small	Establishments			
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
	Personal	Personal	Personal	Personal	Personal	Personal
Required Controls	Protective	Protective	Protective	Protective	Protective	Protective
Required Controls	Clothing and					
	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment
Capital						
Total capital cost of personal protective clothing and equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized						
O&M			Į.		1	ł
Number of plants represented by the model plant	45	45	45	45	45	45
Percentage of plants in the baseline that supplied coveralls or aprons	46%	46%	46%	46%	46%	46%
Percentage of plants in the baseline that supply eye protection	45%	45%	45%	45%	45%	45%
Percentage of plants in the baseline that supply gloves Percentage of employers that will pay for coveralls or aprons	46%	46%	46%	46%	46%	46%
according to industry practice under proposed standard	88.1%	88.1%	88.1%	88.1%	88.1%	88.1%
Percentage of employers that will pay for eye protection according to	00.170	00.176	00.176	00.176	00.176	00.176
industry practice under proposed standard	91.9%	91.9%	91.9%	91.9%	91.9%	91.9%
Percentage of employers that will pay for gloves according to industry	31.370	31.376	31.376	31.376	91.5%	91.9%
practice under proposed standard	88.1%	88.1%	88.1%	88.1%	88.1%	88.1%
Type of protective clothing required (PE coated Tyvek coveralls.	30.176	00.170	00.176	00.176	00.176	00.176
Saranex coveralls, Tyvek coveralls, bib aprons or none)	uniforms	uniforms	uniforms	uniforms	uniforms	uniforms
The unit cost for coveralls or aprons	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
The annual number of replacements for coveralls or aprons ¹	0	0	0	0	0	90.00
Total number of PPE laundered per year	120	120	120	120	120	120
Unit cost of laundering one article of PPE	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Total Number of employees at the plant with the potential for dermal exposure	1	1	1	1	1	1
Type of protective eyewear required (clear indirect vent goggles, clear	clear lens safety	clear lens safety	clear lens safety	clear lens safety	-la-a-la-a-4-4-	_tt
lens safety glasses, grey lens safety glasses or none)	glasses	dasses	diasses	glasses	clear lens safety	clear lens safet
Unit cost of eye protection	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Number of replacement during the year for eye protection	4	40.00	40.00	45.00	45.00	\$5.00 4
Type of gloves required (lined nitrile, powder surgical nitrile, rough	powder surgical	powder surgica				
PVC, none)	nitrile	nitrile	nitrile	nitrile	nitrile	nitrile
The unit cost for gloves	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24
Number of replacements during the year from gloves	120	120	120	120	120	120
Unit Cost of Cr(VI) hazard labels for glove disposal bags	\$0.32	\$0.32	\$0.32	\$0.32	\$0.32	\$0.32
Employee time to dispose of a pair of gloves in labeled container, in	*	· ·				
minutes	1	1	. 1	1 1	1	1
Total Annualized O&M Cost for establishments that do not supply						
protective work clothing and equipment in the baseline	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639
Total Annualized O&M Cost for establishments that supply protective	****		4224			
work clothing and equipment in the baseline but have employees pay	\$324	\$324	\$324	\$324	\$324	\$324
Total Annualized O&M Cost for protective work clothing and equipment	\$4,963	\$4,963	\$4,963	\$4,963	\$4,963	\$4,963
Total Annualized Cost	\$4,963	\$4,963	\$4,963	\$4,963	\$4,963	\$4,963
Rounded Annualized Cost	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960

The unit cost of replacement for coveralls or aprons and the annual number of replacements for coveralls or aprons is zero because the unit cost of laundering

Sector 10. Plastic Colorant Producers and Users. Hygiene Areas and Practices Costs - Large Establishments.

10. PLASTIC COLORANT PRODUCERS AND USERS	ene Areas and Practice	a fact area Catabile	-bta			
Alternative PEL (ug/m3)	20	S for Large Establis	snments 5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
- Micolog dob Calegory		Hygiene Areas and				
Required Controls	Practices	Practices	Practices	Practices	Practices	Practices
Capital					1,120,100	Trucuces
Number of plants represented by the model plant				۰	٠	
Percent of plants requiring additional change rooms	92 30%	92 30%	92 30%	92 30%	92	92
Percent of plants requiring additional handwashing facilities	30%	30%	30%		30%	30%
Percent of plants that require additional showers and employee showering				30%	30%	30%
Number of additional shower heads needed	30%	30%	30%	30%	30%	30%
	2	2	2	2	2	2
Total number of employees at the plant with dermal exposure Number of work shifts	5	5	5	5	5	1 4
	1 -	3	3	3	3	3
Cost per shower head	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39
Cost per handwashing facility	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of handwashing facilities needed	1	1	1	1	1	1
Unit cost of change room per employee	\$1,261.92	\$1,261.92	\$1,261.92	\$1,261.92	\$1,261.92	\$1,261.92
Capital cost if install showers	\$292,140	\$292,140	\$292,140	\$292,140	\$292,140	\$292,140
Capital cost if install handwashing facilities	\$13,800	\$13,800	\$13,800	\$13,800	\$13,800	\$13,800
Capital cost of change rooms	\$56,408	\$56,408	\$56,408	\$56,408	\$56,408	\$47,070
Annualized		}				
O&M	1			į –		
Useful life, in years, of change rooms	10	10	10	10	10	10
Useful life, in years, of handwashing facilities	10	10	10	10	10	10
Number of operating days per year	30	30	30	30	30	30
Daily janitorial and maintenance time, in minutes, per shower head	1 1	1 1	l 1	1 1	1	1 1
Janitorial wage rate, \$/hr	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08
Non-supervisory wage rate, \$/hr	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Useful life, in years, of showers	10	10	10	10	10	10
Time, in minutes, to shower	7.50	7.50	7.50	7.50	7.50	7.50
Variable cost per shower (soap, clean towel, water, etc.)	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Total Annualized O&M Cost if install showers and change rooms	\$15,354	\$15,354	\$15,354	\$15,354	\$15.354	\$12,877
+ Annualized capital cost if install showers	\$41,601	\$41,601	\$41,601	\$41,601	\$41,601	\$41,601
+Annualized Capital cost if install changerooms at end of first year	\$6,963	\$6,963	\$6,963	\$6.963	\$6.963	\$5,810
Total Annualized Cost if install showers and change rooms	\$63,917	\$63,917	\$63,917	\$63.917	\$63,917	\$60,287
Rounded Annualized Cost if Install showers and change rooms	\$63,900	\$63,900	\$63,900	\$63,900	\$63,900	\$60,300
Janitorial time to clean one handwashing facility, in minutes	10	10	10	10	10	10
Variable cost per handwashing facility (roll paper towels, liquid soap, water)	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
Total Annualized O&M cost if install handwashing facilities and change rooms	\$2,184	\$2,184	\$2,184	\$2,184	\$0.00 \$2,184	\$0.00 \$2,144
+ Annualized capital cost if install handwashing facilities and change rooms	\$1,965	\$1,965	\$1,965	\$1,965	\$2,104 \$1,965	\$2,144 \$1,965
+Annualized Capital cost if install changerooms at end of first year	\$6,963	\$6,963	\$6,963	\$6,963	\$6,963	\$1,905 \$5,810
Total Annualized Cost if install handwashing facilities and change rooms	\$11,112	\$11,112	\$11.112	\$6,963 \$11.112	\$6,963 \$11,112	\$5,810 \$9,919
Rounded Annualized cost if install handwashing facilities and change rooms	\$11,100	\$11,100	\$11,172	\$11,112	\$11,112 \$11,100	\$9,919 \$9,900

Sector 10. Plastic Colorant Producers and Users. Hygiene Areas and Practices Costs - Small Establishments.

10. PLASTIC COLORANT PRODUCERS AND USERS						
Cost of Hygier	e Areas and Practice	s for Small Establis	hments			
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	Alt
		Hygiene Areas and				
Required Controls	Practices	Practices	Practices	Practices	Practices	Practices
Capital			i			}
Number of plants represented by the model plant	45	45	45	45	45	45
Percent of plants requiring additional change rooms	55%	55%	55%	55%	55%	55%
Percent of plants requiring additional handwashing facilities	55%	55%	55%	55%	55%	55%
Percent of plants that require additional showers and employee showering	55%	55%	55%	55%	55%	55%
Number of additional shower heads needed	2	2	2	2	2	2
Total number of employees at the plant with dermal exposure	5	5	5	5	5	4
Number of work shifts	1 1	1	1 1	1	1 1	1 1
Cost per shower head	\$5,292.39	\$5,292,39	\$5,292,39	\$5,292,39	\$5,292,39	\$5,292,39
Cost per handwashing facility	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of additional handwashing facilities needed	1	1	1	1	1	1 1
Unit cost of change room per employee	\$1,261,92	\$1,261,92	\$1,261,92	\$1,261,92	\$1,261,92	\$1,261.92
Capital cost if install showers	\$261.973	\$261,973	\$261,973	\$261.973	\$261,973	\$261,973
	\$12,375	\$12,375	\$12,375	\$12,375	\$12,375	\$12,375
Capital cost if install handwashing facilities		\$151,749	\$151,749	\$151,749	\$151,749	\$126,627
Capital cost of change rooms	\$151,749	\$151,749	\$151,749	\$151,74 5	\$151,745	\$120,027
Annualized	1	_				
O&M			l			
Useful life, in years, of change rooms	10	10	10	10	10	10
Useful life, in years, of handwashing facilities	10	10	10	10	10	- 10
Number of operating days per year	30	30	30	30 .	30	30
Daily janitorial and maintenance time, in minutes, per shower head	1	1	1	1	1	1
Janitorial wage rate, \$/hr	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08
Non-supervisory wage rate, \$/hr	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Useful life, in years, of showers	10	10	10	10	10	10
Time, in minutes, to shower	7.50	7.50	7.50	7.50	7.50	7.50
Variable cost per shower (soap, clean towel, water, etc.)	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Total Annualized O&M Cost if install showers and change rooms	\$13,769	\$13,769	\$13,769	\$13,769	\$13,769	\$11,547
+ Annualized capital cost if install showers.	\$37,305	\$37,305	\$37,305	\$37,305	\$37,305	\$37,305
+Annualized Capital cost if install changerooms at end of first year	\$18,731	\$18,731	\$18,731	\$18,731	\$18,731	\$15,630
Total Annualized Cost if install showers and change rooms	\$69.804	\$69,804	\$69.804	\$69.804	\$69.804	\$64,482
Rounded Annualized Cost if install showers and change rooms	\$69,800	\$69,800	\$69,800	\$69,800	\$69,800	\$64,500
Janitorial time to clean one handwashing facility, in minutes	10	10	10	10	10	10
Variable cost per handwashing facility (roll paper towels, tiquid soap, water)	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
Total Annualized O&M cost if install handwashing facilities and change rooms	\$1,959	\$1,959	\$1,959	\$1,959	\$1,959	\$1,923
	\$1,762	\$1,762	\$1,762	\$1,762	\$1,762	\$1,762
+ Annualized capital cost if install handwashing facilities and changerooms	\$18,731	\$18,731	\$18,731	\$18,731	\$18,731	\$15,630
+Annualized Capital cost if install changerooms at end of first year	\$18,731	\$22,452	\$22,452	\$22,452	\$22,452	\$19,315
Total Annualized Cost if install handwashing facilities and change rooms	\$22,452	\$22,452	\$22,452	\$22,500	\$22,500	\$19,300
Rounded Annualized cost if install handwashing facilities and change rooms	\$22,500	322,500	\$22,500	322,500	322,000	1 913,300

Sector 10. Plastic Colorant Producers and Users. Housekeeping Costs - Large Establishments.

AB			for Large Establishm		2.5	0.05
Alternative PEL (ug/m3)	20 All	10 All	5 Ali	1 Ali	0.5 Ali	0.25 Ali
Affected Job Category	Housekeeping -	Housekeeping -	Housekeeping -	Housekeeping -	Housekeeping -	Housekeeping -
	Additional Control	Additional Control	Additional Control	Additional Control	Additional Control	Additional Control
Required Controls	Using Wet or HEPA	Using Wet or HEPA	Using Wet or HEPA	Using Wet or HEPA	Using Wet or HEPA	
Required Controls	Vacuums and	Vacuums and	Vacuums and	Vacuums and	Vacuums and	Vacuums and
	Garbage Bags	Garbage Bags	Garbage Bags	Garbage Bags	Garbage Bags	Garbage Bags
 Capital						
Number of plants represented						
by the model plant	92	92	92	92	92	92
Number of plants requiring new						•
HEPA vacuums	5	5	5	5	5	5
Unit cost of HEPA vacuums	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24
Number of additional HEPA						
vacuums required	1	1	1	1	1	1
Number of plants requiring new		·				
mops and buckets	16	16	16	16	16	16
Number of additional mops and	_	_	5	_	_	_
buckets required	5	. 5	3	5	5	5
Unit cost of mops and buckets	\$62.92	\$62.92	\$62.92	\$62.92	\$62.92	\$62.92
Fotal capital cost of housekeeping	\$17,183	\$17,183	\$17,183	\$17,183	\$17,183	\$17,183
	ŀ					
Annualized						
D&M						
Number of plants represented	92	92	92	92	92	92
by the model plant	1) <u>-</u>	32) J	\	, J.
Number of plants requiring new	5	5	5	5	5	5
HEPA vacuums]			·		_
Number of additional HEPA	1	1	1	1	1	1
vacuums required	ŀ					
Annual number of replacement	2	2	2	2	2	2
filters per HEPA vacuum	1 2	_	_	-	_	-
Unit cost of HEPA vacuum					****	****
replacement filters	\$312.53	\$312.53	\$312.53	\$312.53	\$312.53	\$312.53
Useful life, in years, of a HEPA	40	40	40	40	40	10
vacuum	10	10	10	10	10	10
Annual O&M cost of HEPA	l					
vacuums as a percentage of	\$859.17	\$859.17	\$859.17	\$859.17	\$859.17	\$859.17
capital cost (assumes 5% of	φουσ.17	\$ 033.17	Ψ039.17	Ψ033.17	1 4000.11	4000.17
capital)	ļ	}				
Number of plants requiring new	16	16	16	16	16	16
mops and buckets						
Number of additional mops required	5	5	5	5	5	5
. Cost of mops	\$2.90	\$2.90	\$2.90	\$2.90	\$2.90	\$2.90
Number of wet spills per day	\$2.50	\$2.50 1	1	1	1	1
Cost of water per spill	\$0,0096	\$0.0096	\$0.0096	\$0.0096	\$0.0096	\$0.0096
Janitorial Time to cleanup spill		V	******		, i	·
(hours)	0.25	0.25	0.25	0.25	0.25	0.25
Demont of plants and disposing		1				
Percent of plants not disposing of chromium under RCRA	0%	0%	0%	0%	0%	0%
	1	ļ		1	.:	
Number of additional garbage						
bags required per establishment	30	30	30	30	. 30	30
per year	{		\	<u>.</u>	1	
Unit cost of garbage bags and disposal	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of operating days per	1			_		
year	30	30	30	30	30	30
· · · · · · · · · · · · · · · · · · ·	1					
Janitorial time, in hours per day,	0.5	0.5	0.5	0.5	0.5	0.5
to HEPA vacuum Cr(VI) spills	1]	1			
Janitorial wage rate, \$/hour	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08
Total Annualized O&M Cost	\$7,146	\$7,146	\$7,146	\$7,146	\$7,146	\$7,146
+ Annualized Capital Cost	\$2,447	\$2,447	\$2,447	\$2,447	\$2,447	\$2,447
Total Annualized Cost	\$9,593	\$9,593	\$9,593	\$9,593	\$9,593	\$9,593
Rounded Annualized Cost	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590

Sector 10. Plastic Colorant Producers and Users. Housekeeping Costs - Small Establishments.

Alternative PEL (ug/m3)	20	ost of Housekeeping 10	for Small Establish	nents 1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Required Controls	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEP Vacuums and Garbage Bags
Capital						
Number of plants represented by the model plant	45	45	45	45	45	45
Number of plants requiring new HEPA vacuums	7	7	7	7	7	7
Unit cost of HEPA vacuums Number of additional HEPA	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24
vacuums required	1	1	1	1	1	1
Number of plants requiring new mops and buckets	20	20	20	20	20	20
Number of additional mops and buckets required	3	3	3	3	3	3
Unit cost of mops and buckets	\$63	\$63 .	\$63	\$63	\$63	\$63
otal capital cost of housekeeping	\$19,545	\$19,545	\$19,545	\$19,545	\$19,545	\$19,545
Annualized D&M						
Number of plants represented by the model plant	45	45	45	45	45	45
Number of plants requiring new HEPA vacuums	7	7	7	7	7	7
Number of additional HEPA vacuums required	1	1	1	1 ,	1	1
Annual number of replacement filters per HEPA vacuum	2	2	2	2	2	2
Unit cost of HEPA vacuum replacement filters	\$312.53	\$312.53	\$312.53	\$312.53	\$312.53	\$312.53
Useful life, in years, of a HEPA vacuum	10 [°]	10	10	10	10	10
Annual O&M cost of HEPA vacuums as a percentage of capital cost (assumes 5% of capital)	\$977.24	\$977.24	\$977.24	\$977.24	\$977.24	\$977.24
Number of plants requiring new mops and buckets	20	20	20	20	20	20
Number of additional mops and buckets required	3	3	3	3	3	3
Cost of mops Number of wet spills per day	\$2.90	\$2.90	\$2.90	\$2.90 1	\$2.90 1	\$2.90 1
Cost of water per spill	\$0.0096	\$0.0096	\$0.0096	\$0.0096	\$0.0096	\$0.0096
Janitorial Time to cleanup spill (hours)	0.25	0.25	0.25	0.25	0.25	0.25
Percent of plants not disposing of chromium under RCRA	0%	0%	0%	0%	0%	0%
Number of additional garbage bags required per establishment per year	30	30	30	30 ,	30	30
Unit cost of garbage bags and disposal	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of operating days per year	30	30	30	30	30	30
Janitorial time, in hours per day, to HEPA vacuum Cr(VI) spills	0.5	0.5	0.5	0.5	0.5	0.5
Janitorial wage rate, \$/hour	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08	\$14.08
Total Annualized O&M Cost	\$8,942	\$8,942	\$8,942	\$8,942	\$8,942 \$2,783	\$8,942 \$2,783
+ Annualized Capital Cost	\$2,783	\$2,783	\$2,783	\$2,783	\$2,783 \$11,726	\$2,783 \$11,726
Fotal Annualized Cost Rounded Annualized Cost	\$11,726 \$11,730	\$11,726 \$11,730	\$11,726 \$11,730	\$11,726 \$11,730	\$11,720	\$11,730

Sector 10. Plastic Colorant Producers and Users. Medical Surveillance Costs - Large Establishments.

10. PLASTIC COLORANT PRODUCERS		10- "				
Alternative PEL (ug/m3)	Cost of Medi 20	cal Surveillance 1	for Large Establis 5	hments 1	0.5	0.25
Affected Job Category	All	Ali	Ali	All	All	All
Required Controls	Medical Surveillance	Medical Surveillance	Medical Surveillance	Medical Surveillance	Medical Surveillance	Medical Surveillance
Capital						
Number of plants represented by the model plant	92	92	92	92	92	92
Percent of préviously exposed employees who will be found to have abnormal exam results	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Clerical Wage, \$/hr	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58
Number of employees requiring comprehensive medical exam	0	0	0	0	0	0
Full cost of a comprehensive medical exam	\$400.76	\$400.76	\$400.76	\$400.76	\$400.76	\$400.76
Employee time, in hours, for a full comprehensive medical exam	4	4	4	4	4	4
Number of employees requiring a limited medical exam	0	0	0	0	0	0
Full cost of a limited medical exam	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
Employee time, in hours, for a full limited medical exam	3	3	3	3	3	3
Clerical time per employee, in hours, to establish detailed medical records	1	1	1	1	1	1
Non-supervisory wage rate, \$/hr	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Total number of potentially exposed employees above the PEL and workers with "signs and symptoms"	0	0	. 0	0	0	0
Total up-front cost of medical surveillance	\$0	. \$0	\$0	\$0	\$0	\$0
Annualized O&M						
Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Percent of plants with annual medical testing in the baseline Percent of plants that have jobs	100%	100%	100%	100%	100%	100%
available for employees with abnormal exam results	100%	100%	100%	100%	100%	100%
Cost of additional medical testing after exam results are abnormal	\$213.17	\$213.17	\$213.17	\$213.17	\$213.17	\$213.17
Employee time, in hours, for additional medical testing after exam results are abnormal	3	3	3	3	• з	3
Cost of a partial comprehensive medical exam	\$200.38	\$200.38	\$200.38	\$200.38	\$200.38	\$200.38
Incremental employee time, in hours, for a partial medical exam	3	3	3	3	3	3
Cost of a partial limited medical exam	\$106.59	\$106.59	\$106.59	\$106.59	\$106.59	\$106.59
Incremental employee time, in hours, for a partial limited medical exam Length of time medical removal	0.75	0.75	0.75	0.75	0.75	0.75
protection benefits are required for employees that have abnormal exam results and can't switch to a job that does not have exposure to chromium (VI) in days	0	0	0	0	0	0
Supervisory time, in hours, for workplace reassessment after exam results are abnormal	4	4	4	4	4	,i 4
Supervisory wage rate, \$/hr	\$36.06	\$36.06	\$36.06	\$36.06	\$36.06	\$36.06
Employee turnover rate % of dermally exposed employees	29.16% 0.088%	29.16% 0.088%	29.16% 0.088%	29.16% 0.088%	29.16% 0.088%	29.16% 0.088%
with "signs and symptoms" Number of employees requiring a limited medical exam b/c > PEL ¹	0	0.00076	0.000%	0	0	0.000 %
Number of employees above the PEL requiring a limited medical exam b/c of		О.	0	0	o	0
dermal "signs and symptoms" 1 Number of employees requiring a comprehensive medical exam b/c > PEL1	O _.	a	0	0	o	0 .
Number of employees above the PEL requiring a comprehensive medical exam b/c of dermal "signs and	. 0	0	0	0	. 0	0
symptoms ⁼¹ Fotal Annualized O&M Cost Fotal Annualized Cost	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	, \$0 \$0
Rounded Annualized Cost This industry is not required to conduct me	\$0	\$0	\$0	\$0	\$0_	\$0

Sector 10. Plastic Colorant Producers and Users. Medical Surveillance Costs - Small Establishments.

Alternative PEL (ug/m3) Affected Job Category Required Controls Capital Number of plants represented by the model plant Percent of previously exposed employees who will be found to have abnormal exam results Clerical Wage, \$hr Number of employees requiring comprehensive medical exam Full cost of a comprehensive medical exam Employee time, in hours, for a full comprehensive medical exam Number of employees requiring a limited medical exam Full cost of a limited medical exam Employee time, in hours, for a full limited medical exam Clerical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	20 All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3 1 \$25.76	Surveillance 10	5 All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3	1 All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00	0.5 All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4	0.25 All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4
Required Controls Capital Number of plants represented by the model plant Percent of previously exposed employees who will be found to have abnormal exam results Clerical Wage, \$hr Number of employees requiring comprehensive medical exam Full cost of a comprehensive medical exam Employee time, in hours, for a full comprehensive medical exam Number of employees requiring a limited medical exam Full cost of a limited medical exam Employee time, in hours, for a full limited medical exam Clerical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$/hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam results are abnormal exam exam results are abnormal exam exam exam exam exam exam exam exam	All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3 1 \$25.76	All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3 1	All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3	Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00	All Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4	All Medical Surveillance 45 0.5% \$18.58 0 \$400.76
Capital Number of plants represented by the model plant Percent of previously exposed employees who will be found to have abnormal exam results Clerical Wage, \$hr Number of employees requiring comprehensive medical exam Full cost of a comprehensive medical exam Employee time, in hours, for a full comprehensive medical exam Number of employees requiring a limited medical exam Full cost of a limited medical exam Employee time, in hours, for a full limited medical exam Clarical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for add	\$18.58 0 \$400.76 4 0 \$125.00 3 1 \$25.76	\$18.58 0 \$400.76 4 0 \$125.00 3	\$\text{Surveillance}\$ 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3	\$\text{Surveillance}\$ 45 0.5% \$18.58 0 \$400.76 4 0 \$125.00	Medical Surveillance 45 0.5% \$18.58 0 \$400.76 4	Medical Surveillance 45 0.5% \$18.58 0 \$400.76
Capital Number of plants represented by the model plant Percent of previously exposed employees who will be found to have abnormal exam results Clerical Wage, \$hr Number of employees requiring comprehensive medical exam Full cost of a comprehensive medical exam Employee time, in hours, for a full comprehensive medical exam Number of employees requiring a limited medical exam Full cost of a limited medical exam Employee time, in hours, for a full limited medical exam Clarical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for additional medical testing after exam results are abnormal employee time, in hours, for add	0.5% \$18.58 0 \$400.76 4 0 \$125.00 3 1 \$25.76	45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3	45 0.5% \$18.58 0 \$400.76 4 0 \$125.00 3	45 0.5% \$18.58 0 \$400.76 4 0 \$125.00	45 0.5% \$18.58 0 \$400.76 4	45 0.5% \$18.58 0 \$400.76
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Clerical Wage, \$/hr Number of employees requiring comprehensive medical exam Full cost of a comprehensive medical exam Employee time, in hours, for a full comprehensive medical exam Number of employees requiring a limited medical exam Full cost of a limited medical exam Full cost of a limited medical exam Employee time, in hours, for a full limited medical exam Clerical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$/hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	0 \$400.76 4 0 \$125.00 3 1 \$25.76	0 \$400.76 4 0 \$125.00 3	0 \$400.76 4 0 \$125.00 3	0 \$400.76 4 0 \$125.00	0 \$400.76 4 0	0 \$400.76 4
comprehensive medical exam Full cost of a comprehensive medical exam Employee time, in hours, for a full comprehensive medical exam Number of employees requiring a limited medical exam Full cost of a limited medical exam Full cost of a limited medical exam Employee time, in hours, for a full limited medical exam Clerical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Fotal up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormat exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	\$400.76 4 0 \$125.00 3 1 \$25.76	\$400.76 4 0 \$125.00 3	\$400.76 4 0 \$125.00 3	\$400.76 4 0 \$125.00	\$400.76 4 0	\$400.76 4
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Employee time, in hours, for a full limited medical exam Cterical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$/hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" otal up-front cost of medical surveillance annualized 0.8.M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam lncremental employee time, in hours,	3 1 \$25.76	3 1	3		4.	
limited medical exam Clerical time per employee, in hours, to establish detailed medical records Non-supervisory wage rate, \$/hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" otal up-front cost of medical surveillance unnualized & M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam incremental employee time, in hours,	1 \$25.76	1		ا ۾ ا	\$125.00	\$125.00
to establish detailed medical records Non-supervisory wage rate, \$hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam lncremental employee time, in hours,	\$25.76	,		3	3	3
Non-supervisory wage rate, \$/hr Total number of potentially exposed employees above the PEL and workers with "signs and symptoms" fotal up-front cost of medical surveillance 28.M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam licremental employee time, in hours,	-	\$25.76	1	1	1	1
employees above the PEL and workers with "signs and symptoms" Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	0		\$25.76	\$25.76	\$25.76	\$25.76
Total up-front cost of medical surveillance Annualized D&M Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results Percent of plants with annual medical testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam locremental employee time, in hours,		0	0	0	0	0
Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results. Percent of plants with annual medical testing in the baseline. Percent of plants that have jobs available for employees with abnormal exam results. Cost of additional medical testing after exam results are abnormal. Employee time, in hours, for additional medical testing after exam results are abnormal. Cost of a partial comprehensive medical exam lncremental employee time, in hours,	\$0	. \$0	\$0	\$0	·\$0	\$0
Percent of employees exposed at or above the action level 30 days per year (and therefore requiring a limited or comprehensive medical exam) who will be found to have abnormal results. Percent of plants with annual medical testing in the baseline. Percent of plants that have jobs available for employees with abnormat exam results. Cost of additional medical testing after exam results are abnormal. Employee time, in hours, for additional medical testing after exam results are abnormal. Cost of a partial comprehensive medical exam lncremental employee time, in hours, in hours,			·			
testing in the baseline Percent of plants that have jobs available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
available for employees with abnormal exam results Cost of additional medical testing after exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam incremental employee time, in hours,	100%	100%	100%	100%	100%	100%
exam results are abnormal Employee time, in hours, for additional medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	100%	100%	100%	100%	100%	100%
medical testing after exam results are abnormal Cost of a partial comprehensive medical exam Incremental employee time, in hours,	\$213.17	\$213.17	\$213.17	\$213.17	\$213.17	\$213.17
medical exam Incremental employee time, in hours,	3	3	3	3	3	3
	\$200.38	\$200.38	\$200.38	\$200.38	\$200.38	\$200.38
for a partial medical exam	3	3	3	3	3	3
Cost of a partial limited medical exam	\$106.59	\$106.59	\$106.59	\$106.59	\$106.59	\$106.59
Incremental employee time, in hours, for a partial limited medical exam Length of time medical removal	0.75	0.75	0.75	0.75	0.75	0.75
protection benefits are required for employees that have abnormal exam results and can't switch to a job that does not have exposure to chromium (VI) in days	0	0	o	0	. 0	0
Supervisory time, in hours, for workplace reassessment after exam results are abnormal	4	4	4	4	4	4
Supervisory wage rate, \$/hr Employee turnover rate	\$36.06 29.16%	\$36.06 29.16%	\$36.06	\$36.06	\$36.06	\$36.06
% of demaily exposed employees with "signs and symptoms"	0.088%	0.088%	29.16% 0.088%	29.16% 0.088%	29,16% 0.088%	29.16% 0.088%
Number of employees requiring a limited medical exam b/c > PEL ¹	. 0	o	ò	0	0	0
Number of employees above the PEL requiring a limited medical exam b/c of dermal "riggs and symptoms".	0	0	0	o	0	0
dermal "signs and symptoms" Number of employees requiring a comprehensive medical exam b/c > PEL¹	o	0	0	0	0	0
Number of employees above the PEL requiring a comprehensive medical exam b/c of dermal "signs and	o	0	0	0	o	0
symptoms" otal Annualized O&M Cost otal Annualized Cost tounded Annualized Cost	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0

Sector 10. Plastic Colorant Producers and Users. Communication Costs - Large Establishments.

10. PLASTIC COLORANT PRODUCERS AND USERS	· · · · · · · · · · · · · · · · · · ·				··· ··· ··· ··· ··· ··· ··	
Cost of Communica			mployees for Lar	ge Establishment:	s	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
	Communication	Communication	Communication	Communication	Communication	Communication
			of Chromium (VI)	of Chromium (VI)	of Chromium (VI)	of Chromium (VI)
	Hazards to	Hazards to	Hazards to	Hazards to	Hazards to	Hazards to
Required Controls	Employees	Employees	Employees	Employees	Employees	Employees
Capital		·			1	
Number of plants represented by the model plant	92	92	92	92	92	92
Clerical Wage rate, \$/hour	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58
Clerical time, in hours, for initial training	4	4	4	4	4	4
Supervisory time, in hours, for initial training	2	2	2	2	2	2
Employee time, in hours, for initial training	1 .	1	1	1	- 1	1
Non-supervisory wage rate, \$/hour	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Number of workers potentially exposed to airborne	6	6	6	6		_
Cr(VI) and workers with dermal exposure	"	0	0	0	6	6
Supervisory wage rate, \$/hour	\$36.06	\$36.06	\$36.06	\$36.06	\$36.06	\$36.06
Cost per employee for training aids and materials	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Bilingual Trainer Wage Rate, \$/hour	\$29.62	\$29.62	\$29.62	\$29.62	\$29.62	\$29.62
Number of potentially exposed employees per	10	10	10	10	40	40
training session	10	. 10	10	10	10	10
Percent of plants requiring warning signs that	15%	28%	36%	86%	2004	0=1/
employee is entering a regulated area signs	15%	20%	30%	86%	86%	97%
Number of job categories exposed above the PEL	3	3	3	3	3	4
Number of warning signs for entering each regulated	2	2	•			-
area	_	2	2	2	2	2
Unit cost of OSHA-regulation warning signs with	\$3.84	\$3.84	\$3.84	\$3.84	***	****
mounting materials	\$3.04	\$3.04	\$3.04	\$3.84	\$3.84	\$3.84
Useful life, in years, of a warning sign	10	10	10	10	10	10
Total up-front cost of communication of hazards	\$30,431	\$30,431	\$30,431	\$30,431	\$30,431	\$30,431
Total capital cost of communication of hazards	\$322	\$598	\$753	\$1,830	\$1,830	\$2,740
Annualized					,	•
O&M .						
Annual clerical time, in hours, to prepare for annual training	2	2	2	2	2	2
Employee time, in hours, for annual training	0.5	0.5	0.5	0.5	0.5	0.5
Annual supervisory time, in hours, for initial and	0.5	0.5	0.5	0.5	0.5	0.5
annual training] 1	1]	1	1	1	1
Employee turnover rate	29.16%	29.16%	29.16%	29.16%	29.16%	29.16%
Percent of establishments that require annual training	0%	0%	0%	0%	0%	0%
Total Annualized O&M Cost	\$5,727	\$5,727	\$5,727	\$5,727	\$5,727	\$5,727
+ Annualized Capital Cost	\$24	\$45	\$56	\$137	\$137	\$205
Total Annualized Cost	\$5,751	\$5,772	\$5,784	\$5,864	\$5,864	\$5,932
Rounded Annualized Cost	\$5,750	\$5,770	\$5,780	\$5,860	\$5,860	\$5,930

Sector 10. Plastic Colorant Producers and Users. Communication Costs - Small Establishments.

10. PLASTIC COLORANT PRODUCERS AND USERS						
Cost of Communic				ali Establishment		
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Required Controls	Communication of Chromium (VI) Hazards to Employees	Communication of Chromium (VI) Hazards to Employees	Communication of Chromium (VI) Hazards to Employees	Communication of Chromium (VI) Hazards to Employees	Communication of Chromium (VI) Hazards to Employees	Communication of Chromium (Vi) Hazards to Employees
Capital						
Number of plants represented by the model plant Clerical Wage rate, \$/hour	45 \$18.58	45 \$18.58 4	45 \$18.58	45 \$18.58	45 \$18.58	45 \$18.58
Clerical time, in hours, for initial training Supervisory time, in hours, for initial training	4 2	2	4 2	4 2	4	4
Employee time, in hours, for initial training	1 1	1	1	1	2 1	2
Non-supervisory wage rate, \$/hour	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	1 005.70
Horr-supervisory wage rate, priods	\$25.70	\$25.70	\$23.76	\$23.10	\$20.76	\$25.76
Number of workers potentially exposed to airborne Cr(VI) and workers with dermal exposure	1	1	1	1	1	1
Supervisory wage rate, \$/hour	\$36.06	\$36.06	\$36.06	\$36.06	\$36.06	\$36.06
Cost per employee for training aids and materials	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Bilingual Trainer Wage Rate, \$/hour	\$29.62	\$29.62	\$29.62	\$29.62	\$29.62	\$29.62
Number of potentially exposed employees per training session	10	10	10	10	10	10
Percent of plants requiring warning signs that employee is entering a regulated area signs	15%	28%	36%	86%	86%	97%
Number of job categories exposed above the PEL	5	5	5	5	5	5
Number of warning signs for entering each regulated area	2	2	2	2	2	2
Unit cost of OSHA-regulation warning signs with mounting materials	\$3.84	\$3.84	\$3.84	\$3.84	\$ 3.84 ·	\$3.84
Useful life, in years, of a warning sign	10	10	10	10	10	10
Total up-front cost of communication of hazards	\$7,972	\$7,972	\$7,972	\$7,972	\$7,972	\$7,972
Total capital cost of communication of hazards	\$263	\$488	\$ 614	\$1,492	\$1,492	\$1,675
Annualized O&M						
Annual clerical time, in hours, to prepare for annual training	2	2	2	2	2	2
Employee time, in hours, for annual training	0.5	0.5	0.5	0.5	0.5	0.5
Annual supervisory time, in hours, for initial and annual training	1	1	1	1	1	1
Employee turnover rate	29.16%	29.16%	29.16%	29.16%	29.16%	29.16%
Percent of establishments that require annual training	0%	0%	0%	0%	0%	0%
Total Annualized O&M Cost	\$467	\$467	\$467	· \$467	\$467	\$467
+ Annualized Capital Cost	\$20	\$37	\$46	\$112	\$407 \$112	\$407 \$125
Total Annualized Cost	\$487	\$503	\$513	\$579	\$579	\$123 \$592
Rounded Annualized Cost	\$490	\$500	\$510	\$580	\$580	\$590

Sector 10. Plastic Colorant Producers and Users. Recordkeeping Costs - Large Establishments.

10. PLASTIC COLORANT PRODUCERS AND I		keeping for Larg	e Fatabliahmani	·		
Alternative PEL (ug/m3)	20	10	5	.5	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Required Controls	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping
Capital						
Number of plants represented by the model plant	92	92	92	92	92	92
Number of workers potentially exposed to airborne Cr(VI) and workers with dermal exposure	6	6	6	6	6	6
Cost per employee for computer file space	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Total capital cost of recordkeeping	\$552	\$552	\$552	\$552	\$552	\$552
Annualized O&M						
Clerical wage rate, \$/hour	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58
Useful life, in years, of computer file space	10	10	10	10	10	10
Annual incremental clerical recordkeeping time per employee, in hours	0.25	0.25	0.25	0.25	0.25	0.25
Total Annualized O&M Cost	\$2,564	\$2,564	\$2,564	\$2,564	\$2,564	\$2,564
+ Annualized capital cost of recordkeeping	\$79	\$79	\$79	\$79	\$79	\$79
Total Annualized Cost	\$2,643	\$2,643	\$2,643	\$2,643	\$2,643	\$2,643
Rounded Annualized Cost	\$2,640	\$2,640	\$2,640	\$2,640	\$2,640	\$2,640

Sector 10. Plastic Colorant Producers and Users. Recordkeeping Costs - Small Establishments.

	Cost of Record	keeping for Sma	II Establishment	s		
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Required Controls	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping
Capital						
Number of plants represented by the model plant	45	45	45	45	45	.45
Number of workers potentially exposed to airborne Cr(VI) and workers with dermal exposure	1	1	1	1	1	. 1
Cost per employee for computer file space	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Total capital cost of recordkeeping	\$45	\$45	\$45	\$45	\$45	\$45
Annualized O&M						
Clerical wage rate, \$/hour	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58	\$18.58
Useful life, in years, of computer file space	10	10	10	10	10	10
Annual incremental clerical recordkeeping time per employee, in hours	0.25	0.25	0.25	0.25	0.25	0.25
Total Annualized O&M Cost	\$209	\$209	\$209	\$209	\$209	\$209
+ Annualized capital cost of recordkeeping	\$6	\$6	\$6	\$6	\$6	\$6
Total Annualized Cost	\$215	\$215	\$215	\$215	\$215	\$215
Rounded Annualized Cost	\$220	\$220	\$220	\$220	\$220	\$220

Sector 10. Plastic Colorant Producers and Users. Total Costs - Large Establishments.

Annualized Cost Required to Achieve Alter	20				T	
Alternative PEL (ug/m3)		10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	Ali	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$484,114	\$607,614	\$886,514	\$1,241,414	\$1,289,014	\$1,614,914
Respirator Fitting	\$6,520	\$8,210	\$19,950	\$19,950	\$22,400	\$23,120
Respirator Protection	\$79,742	\$110,402	\$231,859	\$288,717	\$312,992	\$331,971
Personal Protective Equipment	\$31,250	\$31,250	\$31,250	\$31,250	\$31,250	\$26,070
Establishments that do not supply protective work clothing and equipment in the baseline	\$26,392	\$26,392	\$26,392	\$26,392	\$26,392	\$22,022
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$4,856	\$4,856	\$4,856	\$4,856	\$4,856	\$4,052
Hygiene Areas and Practices		i				
If install showers and change rooms	\$63,900	\$63,900	\$63,900	\$63,900	\$63,900	\$60,300
if install handwashing facilities and change rooms	\$11,100	\$11,100	\$11,100	\$11,100	\$11,100	\$9,900
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590
Medical Surveillance	\$0	\$0	\$0	\$0	\$ 0	\$0
Communication of Chromium (VI) Hazards to Employees	\$36,381	\$36,571	\$36,681	\$37,421	\$37,421	\$38,061
Recordkeeping	\$2,640	\$2,640	\$2,640	\$2,640	\$2,640	\$2,640
Total Annualized Cost in the First Year to Achieve Alternative PEL						
if install showers and change rooms	\$714,137	\$870,177	\$1,282,384	\$1,694,882	\$1,769,207	\$2,106,666
if install handwashing facilities and change rooms	\$661,337	\$817,377	\$1,229,584	\$1,642,082	\$1,716,407	\$2,056,266

Annualized Cost Required to Achieve Alte	emative PEL After t	he First Year for La	rge Plastic Colorant	Producer and User	Establishmente	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$232,700	\$356,200	\$635,100	\$990,000	\$1,037,600	\$1,363,500
Respirator Fitting	\$6,520	\$8,210	\$19,950	\$19,950	\$22,400	\$23,120
Respirator Protection	\$79,742	\$110,402	\$231,859	\$288,717	\$312,992	\$331,971
Personal Protective Equipment	\$31,250	\$31,250	\$31,250	\$31,250	\$31,250	\$26,070
Establishments that do not supply protective work clothing and equipment in the baseline	\$26,392	\$26,392	\$26,392	\$26,392	\$26,392	\$22,022
Establishments that supply protective work clothing and equipment in the baseline but have employees pay historiene Areas and Practices	\$4,856	\$4,856	\$4,856	\$4,858	\$4,856	\$4,052
If install showers and change rooms	\$63,900	\$63,900	\$63,900	\$63,900	\$63,900	\$60,300
if install handwashing facilities and change rooms	\$11,100	\$11,100	\$11,100	\$11,100	\$11,100	\$9,900
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590
Medical Surveillance	\$0	\$0	\$ 0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$5,950	\$6,140	\$6,250	\$6,990	\$6,990	\$7,630
Recordkeeping	\$2,640	\$2,640	\$2,640	\$2,840	\$2,640	\$2,640
Total Annualized Cost to Achieve Alternative PEL After the First Year						
If install showers and change rooms	\$432,292	\$588,332	\$1,000,539	\$1,413,037	\$1,487,362	\$1,824,821
if Install handwashing facilities and change rooms	\$379,492	\$535,532	\$947,739	\$1,360,237	\$1,434,562	\$1,774,421

10 Year Annual Cost Required to	Achieve Alternative	PEL for Large Plan	tic Colorant Produc	er and User Establis	hments	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0,25
Affected Job Category	All	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$268,496	\$391,996	\$670,896	\$1,025,796	\$1,073,396	\$1,399,296
Respirator Fitting	\$6,520	\$8,210	\$19,950	\$19,950	\$22,400	\$23,120
Respirator Protection	\$79,742	\$110,402	\$231,859	\$288,717	\$312,992	\$331,971
Personal Protective Equipment	\$31,250	\$31,250	\$31,250	\$31,250	\$31,250	\$26,070
Establishments that do not supply protective work clothing and equipment in the baseline	\$26,392	\$26,392	\$26,392	\$26,392	\$26,392	\$22,022
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$4,858	\$4,856	. \$4,856 .	\$4,858	\$4,856	\$4,062
Hygiene Areas and Practices				1	,	
if install showers and change rooms	\$63,900	\$63,900	\$63,900	\$63,900	\$63,900	\$60,300
if install handwashing facilities and change rooms	\$11,100	\$11,100	\$11,100	\$11,100	\$11,100	\$9,900
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590	\$9,590
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$10,283	\$10,473	\$10,583	\$11,323	\$11,323	\$11,963
Recordkeeping	\$2,640	\$2,640	\$2,640	\$2,640	\$2,640	\$2,640
Total Annualized Cost to Achieve Alternative PEL After the First Year						
If install showers and change rooms	\$472,420	\$628,460	\$1,040,667	\$1,453,165	\$1,527,490	\$1,864,949
if install handwashing facilities and change rooms	\$419,620	\$575,660	\$987,867	\$1,400,365	\$1,474,690	\$1,814,549

Sector 10. Plastic Colorant Producers and Users. Total Costs - Small Establishments.

Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$110,923	\$154,823	\$243,923	\$376,123	\$390,723	\$421,823
Respirator Fitting	\$11,410	\$14,360	\$3,510	\$3,510	\$3,950	\$4,070
Respirator Protection	\$4,198	\$5,806	\$12,205	\$15,296	\$16,679	\$17,732
Personal Protective Equipment	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960
Establishments that do not supply protective work clothing and equipment in the baseline	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$324	\$324	\$324	\$324	\$324	\$324
Hygiene Areas and Practices]		
If install showers and change rooms	\$69,800	\$69,800	\$69,800	\$89,800	\$69,800	\$64,500
If install handwashing facilities and change rooms	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$19,300
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$11,730	\$11,730	\$11,730	\$11,730	\$11,730	\$11,730
Medical Surveillance	\$0	\$0	\$ 0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$8,622	\$8,772	\$8,862	\$9,472	\$9,472	\$9,602
Recordicesping	\$220	\$220	\$220	\$220	\$220	\$220
Total Annualized Cost in the First Year to Achieve Alternative PEL						
if install showers and change rooms	\$221,861	\$270,471	\$355,210	\$491,111	\$507,534	\$534,637
if install handwashing facilities and change rooms	\$174,581	\$223,171	\$307,910	\$443,811	\$460,234	\$489,437

Annualized Cost Required to Achieve Alterna			il Plastic Colorant	Producer and Use	Establishments	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	Alt	Alt
inglneering Controls	\$0	\$0	\$0	\$0	\$0	\$0
exposure Monitoring	\$78,400	\$122,300	\$211,400	\$343,600	\$358,200	\$389,300
tespirator Fitting	\$11,410	\$14,360	\$3,510	\$3,510	\$3,950	\$4,070
tespirator Protection	\$4,196	\$5,806	\$12,205	\$15,296	\$16,679	\$17,732
ersonal Protective Equipment	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960
Establishments that do not supply protective work clothing and equipment in the baseline	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639
Establishments that supply protective work clothing and equipment in the baseline but have employees pay lygiene Areas and Practices	\$324	\$324	\$324	\$324	\$324	\$324
If install showers and change rooms	\$69,800	\$69,800	\$69,800	\$69,800	\$69,800	\$64,500
if install handwashing facilities and change rooms	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$19,300
lousekeeping - Additional Control Using Wet or HEPA Vacuums	\$11,730	\$11,730	\$11,730	\$11,730	\$11,730	\$11,730
tedical Surveillance	\$0	\$0	\$0	\$ 0	\$0	\$0
communication of Chromium (VI) Hazards to Employees	\$650	\$800	\$890	\$1,500	\$1,500	\$1,630
tecordkeeping	\$220	\$220	\$220	\$220	\$220	\$220
otal Annualized Cost to Achieve Alternative PEL After the First						
If install showers and change rooms	\$181,366	\$229,976	\$314,715	\$450,616	\$467,039	\$494,142
if install handwashing facilities and change rooms	\$134,066	\$182,676	\$267,415	\$403,316	\$419,739	\$448,942

10 Year Annual Cost Required to Achi	eve Atternative P	FI. for Small Plastic	Colorant Produce	er and User Fatabil	shments	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	Atl	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$83,031	\$126,931	\$216,031	\$348,231	\$362,831	\$393,931
Respirator Fitting	\$11,410	\$14,360	\$3,510	\$3,510	\$3,950	\$4,070
Respirator Protection	\$4,196	\$5,806	\$12,206	\$15,296	\$16,679	\$17,732
Personal Protective Equipment	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960	\$4,960
Establishments that do not supply protective work clothing and equipment in the baseline Establishments that supply protective work clothing and	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639 .	\$4,639
equipment in the baseline but have employees pay Hygiene Areas and Practices	\$324	\$324	\$324	\$324	\$324	\$324
If install showers and change rooms	\$69,800	\$69,800	\$69,800	\$69,800	\$69,800	\$64,500
if install handwashing facilities and change rooms	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$19,300
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$11,730	\$11,730	\$11,730	\$11,730	\$11,730	\$11,730
Medical Surveillance	\$0	\$0	\$0	\$0	* \$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$1,785	\$1,935	\$2,025	\$2,635	\$2,635	\$2,765
Recordkeeping	\$220	\$220	\$220	\$220	\$220	\$220
Total Annualized Cost to Achieve Atternative PEL After the First Year	· · · · · · · · · · · · · · · · · · ·					
If install showers and change rooms	\$187,132	\$235,742	\$320,481	\$456,382	\$472,805	\$499,908
if install handwashing facilities and change rooms	\$139,832	\$188,442	\$273,181	\$409,082	\$425,505	\$454,708

Sector 10. Plastic Colorant Producers and Users. Cost per Establishment - Large Establishments.

	Pi	ant				
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	Añ	Alt	All	All	All .	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$5,262	\$6,604	\$9,636	\$13,494	\$14,011	\$17,553
Respirator Fitting	\$71	\$89	\$217	\$217	\$243	\$251
Respirator Protection	\$867	\$1,200	\$2,520	\$3,138	\$3,402	\$3,608
Personal Protective Equipment	\$340	\$340	\$340	\$340	\$340	\$283
Establishments that do not supply protective work clothing and equipment in the baseline	\$287	\$287	\$287	\$287	\$287	\$239
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$53	\$53	\$53	\$ 53	\$53	\$44
Hygiene Areas and Practices		İ	1	İ	1	
If install showers and change rooms	\$69 5	\$6 95	\$695	\$695	\$695	\$655
if install handwashing facilities and change rooms	\$121	\$121	\$121	\$121	\$121	\$108
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$104	\$104	\$104	\$104	\$104	\$104
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$395	\$398	\$399	\$407	\$407	\$414
Recordkeeping	\$29	\$29	\$29	\$29	\$29	\$29
Total Annualized Cost in the First Year to Achieve Alternative PEL						
If install showers and change rooms	\$7,762	\$9,458	\$13,939	\$18,423	\$19,231	\$22,899
If Install handwashing facilities and change rooms	\$7,188	\$8,885	\$13,365	\$17,849	\$18,657	\$22,351

Annualized Cost Required to Achieve Alternative PEL After the F		ant				
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	Ali	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$2,529	\$3,872	\$6,903	\$10,761	\$11,278	\$14,821
Respirator Fitting	\$71	\$89	\$217	\$217	\$243	\$251
Respirator Protection	\$867	\$1,200	\$2,520	\$3,138	\$3,402	\$3,608
Personal Protective Equipment	\$340	\$340	\$340	\$340	\$340	\$283
Establishments that do not supply protective work clothing and equipment in the baseline	\$287	\$287	\$287	\$287	\$287	\$239
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$53	\$53	\$ 53	\$ 53	\$ 53	\$44
Hygiene Areas and Practices			ļ			ŀ
If install showers and change rooms	\$695	\$695	\$695	\$695	\$695	\$655
if install handwashing facilities and change rooms	\$121	\$121	\$121	\$121	\$121	\$108
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$104	\$104	\$104	\$104	\$104	\$104
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$65	\$67	\$68	\$76	\$76	\$83
Recordkeeping	\$29	\$29	\$29	\$29	\$29	\$29
Total Annualized Cost to Achieve Alternative PEL After the First Year						
If install showers and change rooms	\$4,699	\$6,395	\$10,875	\$15,359	\$16,167	\$19,835
If install handwashing facilities and change rooms	\$4,125	\$5,821	\$10,302	\$14,785	\$15,593	\$19,287

10 Year Annual Cost Required to Achieve Alto	ernative PEL fo	r One Large Pla	stic Colorant Pro	ducer and User	Establishment	
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	Alt	Aff	All	Ali	Ail	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$2,918	\$4,261	\$7,292	\$11,150	\$11,667	\$15,210
Respirator Fitting	\$71	\$89	\$217	\$217	\$243	\$251
Respirator Protection	\$867	\$1,200	\$2,520	\$3,138	\$3,402	\$3,608
Personal Protective Equipment	\$340	\$340	\$340	\$340	\$340	\$283
Establishments that do not supply protective work clothing and equipment in the baseline	\$287	\$287	\$287	\$287	\$287	\$239
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$53	\$53	\$53	\$ 53	\$ 53	\$44
Hygiene Areas and Practices						
If install showers and change rooms	\$695	\$695	\$695	\$695	\$695	\$655
if install handwashing facilities and change rooms	\$121	\$121	\$121	\$121	\$121	\$108
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$104	\$104	\$104	\$104	\$104	\$104
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$112	\$114	\$115	\$123	\$123	\$130
Recordkeeping	\$29	\$29	\$29	\$29	\$29	\$29
Total Annualized Cost to Achieve Alternative PEL After the First Year						
If Install showers and change rooms	\$5,135	\$6,831	\$11,312	\$15,795	\$16,603	\$20,271
if install handwashing facilities and change rooms	\$4,561	\$6,257	\$10,738	\$15,221	\$16,029	\$19,723

Sector 10. Plastic Colorant Producers and Users. Cost per Establishment - Small Establishments.

Annualized Cost Required to Achieve Alternative PEL During the		ant	CONTRACT PROCES	cet elia Ossi Est	aniioiiiii#II(D456	u on the Mode
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	Ali	All	Aff
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$2,465	\$3,441	\$5,421	\$8,358	\$8,683	\$9,374
Respirator Fitting	\$254	\$319	\$78	\$78	\$88	\$90
Respirator Protection	\$93	\$129	\$271	\$340	\$371	\$394
Personal Protective Equipment	\$110	\$110	\$110	\$110	\$110	\$110
Establishments that do not supply protective work clothing and equipment in the baseline	\$103	\$103	\$103	\$103	\$103	\$103
Establishments that supply protective work clothing and equipment in the baseline but have employees pay Hygiene Areas and Practices	\$7	\$7	\$7	\$7	\$7	\$ 7
If install showers and change rooms	\$1,551	- \$1,551	\$1,551	\$1,551	\$1,551	\$1,433
if install handwashing facilities and change rooms	\$500	\$500	\$500	\$500	\$500	\$429
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$261	\$261	\$261	\$261	\$261	\$261
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$ 0
Communication of Chromium (VI) Hazards to Employees	\$192	\$195	\$197	\$210	\$210	\$213
Recordkeeping	\$ 5	\$5	\$ 5	\$ 5	\$ 5	\$5
Total Annualized Cost in the First Year to Achieve Alternative PEL						
If Install showers and change rooms	\$4,930	\$6,010	\$7,894	\$10,914	\$11,279	\$11,881
if install handwashing facilities and change rooms	\$3,879	\$4,959	\$6,842	\$9,862	\$10,227	\$10,876

Annualized Cost Required to Achieve Alternative PEL After the First Year for One Small Plastic Colorant Producer and User Establishment Based on the Model Plant									
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25			
Affected Job Category	Ali	All	All	All	All	Aff			
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0			
Exposure Monitoring	\$1,742	\$2,718	\$4,698	\$7,636	\$7,980	\$8,651			
Respirator Fitting	\$254	\$319	\$78	\$78	\$88	\$90			
Respirator Protection	\$93	\$129	\$271	\$340	\$371	\$394			
Personal Protective Equipment	\$110	\$110	\$110	\$110	\$110	\$110			
Establishments that do not supply protective work clothing and equipment in the baseline	\$103	\$103	\$103	\$103	\$103	\$103			
Establishments that supply protective work clothing and equipment in the baseline but have employees pay Hyglene Areas and Practices	\$ 7	\$7	\$7	\$7	\$7	\$7			
If install showers and change rooms	\$1,551	\$1,551	\$1,551	\$1,551	\$1,551	\$1,433			
if install handwashing facilities and change rooms	\$500	\$500	\$500	\$500	\$500	\$429			
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$261	\$261	\$261	\$261	\$261	\$261			
Medical Surveillance	\$0	\$0	\$0	\$0	· \$0	\$0			
Communication of Chromium (VI) Hazards to Employees	\$14	\$18	\$20	\$33	\$33	\$36			
Recordkeeping	\$5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5			
Total Annualized Cost to Achieve Alternative PEL After the First Year									
If install showers and change rooms	\$4,030	\$5,111	\$6,994	\$10,014	\$10,379	\$10,981			
if install handwashing facilities and change rooms	\$2,979	\$4,059	\$5,943	\$8,963	\$9,328	\$9,976			

10 Year Annual Cost Required to Achieve Alte	rnative PEL for	One Small Plasti	ic Colorant Prod	ucer and User E	stablishment	
Aitemative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	Ali	All	Ali	All	Ali	Ali
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$1,845	\$2,821	\$4,801	\$7,738	\$8,063	\$8,754
Respirator Fitting	\$254	\$319	\$78	\$78	\$88	\$90
Respirator Protection	\$93	\$129	\$271	\$340	\$371	\$394
Personal Protective Equipment	\$110	\$110	\$110	\$110	\$110	\$110
Establishments that do not supply protective work clothing and equipment in the baseline	\$103	\$103	\$103	\$103	\$103	\$103
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$7	\$7	` \$ 7	\$ 7	\$7	\$7
Hygiene Areas and Practices					1	
If install showers and change rooms	\$1,551	\$1,551	\$1,551	\$1,551	\$1,551	\$1,433
if install handwashing facilities and change rooms	\$500	\$500	\$500	\$500	\$500	\$429
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$261	\$261	\$261	\$261	\$261	\$261
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$40	\$43	\$4 5	\$59	\$59	\$61
Recordkeeping	\$ 5	\$5	\$ 5	\$ 5	\$ 5	\$ 5
Fotal Annualized Cost to Achieve Alternative PEL After the First Year						
if install showers and change rooms	\$4,158	\$5,239	\$7,122	\$19,142	\$10,507	\$11,109
if install handwashing facilities and change rooms	\$3,107	\$4,188	\$6,071	\$9,091	\$9,456	\$10,105

Sector 10. Plastic Colorant Producers and Users. Non-Annualized Costs - Large Establishments.

Non-Annualized Cost Required to Achieve Alterna		g the First Year to on the Model Pla	-	Colorant Produ	icer and User Es	tablishments
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	Ail	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$484,104	\$607,663	\$886,559	\$1,241,414	\$1,288,968	\$1,614,883
Respirator Fit-Testing	\$6,519	\$8,206	\$19,949	\$19,949	\$22,399	\$23,116
Respirator Protection	\$83,466	\$115,091	\$243,257	\$311,601	\$347,100	\$372,005
Personal Protective Equipment	\$31,247	\$31,247	\$31,247	\$31,247	\$31,247	\$26,074
Establishments that do not supply protective work clothing and equipment in the baseline	\$26,392	\$26,392	\$26,392	\$26,392	\$26,392	\$22,022
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$4,856	\$4,856	\$4,856	\$4,856	\$4,856	\$4,052
Hygiene Areas and Practices		-		\	1	
If install showers and change rooms	\$363,902	\$363,902	\$363,902	\$363,902	\$363,902	\$352,086
if install handwashing facilities and change rooms	\$72,392	\$72,392	\$72,392	\$72,392	\$72,392	\$63,014
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$24,329	\$24,329	\$24,329	\$24,329	\$24,329	\$24,329
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$ 0
Communication of Chromium (VI) Hazards to Employees	\$37,884	\$39,359	\$40,188	\$45,955	\$45,955	\$50,824
Recordkeeping	\$3,116	\$3,116	\$3,116	\$3,116	\$3,116	\$3,116
Total Non-Annualized Cost in the First Year to Achieve Alternative PEL						
If install showers and change rooms	\$1,034,567	\$1,192,913	\$1,612,547	\$2,041,513	\$2,127,017	\$2,466,434
if install handwashing facilities and change rooms	\$743;057	\$901,404	\$1,321,037	\$1,750,003	\$1,835,507	\$2,177,362

Non-Annualized Cost Required to Achieve Alternati	•	the Second thro	_	for Large Large	Plastic Coloran	Producer and
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	Ail	Ail	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$232,690	\$356,249	\$635,145	\$990,000	\$1,037,554	\$1,363,469
Respirator Fit-Testing	\$6,519	\$8,206	\$19,949	\$19,949	\$22,399	\$23,116
Respirator Protection	\$79,124	\$109,624	\$229,967	\$284,917	\$307,329	\$325,324
Personal Protective Equipment	\$31,247	\$31,247	\$31,247	\$31,247	\$31,247	\$26,074
Establishments that do not supply protective work clothing and equipment in the baseline	\$26,392	\$26,392	\$26,392	\$26,392	\$26,392	\$22,022
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$4,856	\$4,856	\$4,856	\$4,856	\$4,856	\$4,052
Hygiene Areas and Practices				Į		
If install showers and change rooms	\$15,354	\$15,354	\$15,354	\$15,354	\$15,354	\$12,877
if install handwashing facilities and change rooms	\$2,184	\$2,184	\$2,184	\$2,184	\$2,184	\$2,144
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$7,146	\$7,146	\$7,146	\$7,146	\$7,146	\$7,146
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$5,727	\$5,727	\$5,727	\$5,727	\$5,727	\$5,727
Recordkeeping	\$2,564	\$2,564	\$2,564	\$2,564	\$2,564	\$2,564
Total Non-Annualized Cost in the Second through Tenth Year to Achieve Alternative PEL						
If install showers and change rooms	\$380,371	\$536,117	\$947,099	\$1,356,904	\$1,429,321	\$1,766,297
if install handwashing facilities and change rooms	\$367,201	\$522,948	\$933,929	\$1,343,735	\$1,416,151	\$1,755,565

Sector 10. Plastic Colorant Producers and Users. Non-Annualized Costs - Small Establishments.

Non-Annualized Upfront Cost Required to Ach		e PEL During the Based on the M		Small Plastic Co	lorant Producer	and User
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$110,971	\$154,865	\$243,935	\$376,108	\$390,730	\$421,837
Respirator Fit-Testing	\$11,408	\$14,361	\$3,515	\$3,515	\$3,946	\$4,072
Respirator Protection	\$4,574	\$6,282	\$13,363	\$17,634	\$20,169	\$21,830
Personal Protective Equipment						
Establishments that do not supply protective work clothing and equipment in the baseline	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$324	\$324	\$324	\$324	\$324	\$324
Hyglene Areas and Practices						
If install showers and change rooms	\$427,491	\$427,491	\$427,491	\$427,491	\$427,491	\$400,147
if install handwashing facilities and change rooms	\$166,083	\$166,083	\$166,083	\$166,083	\$166,083	\$140,925
Housekeeping - Additional Control Using Wet or HEPA /acuums	\$28,487	\$28,487	\$28,487	\$28,487	\$28,487	\$28,487
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$9,846	\$11,049	\$11,724	\$16,425	\$16,425	\$17,406
Recordkeeping	\$254	\$254	\$254	\$254	\$254	\$254
Total Non-Annualized Cost in the First Year to Achieve Alternative PEL						
If install showers and change rooms	\$593,031	\$642,789	\$728,769	\$869,914	\$887,502	\$894,034
if install handwashing facilities and change rooms	\$331,623	\$381,381	\$467,361	\$608,506	\$626,094	\$634,812

Non-Annualized Upfront Cost Required to Achiev Producer		PEL During the S	_		imail Large Plas	tic Colorant
Alternative PEL (ug/m3)	20	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$78,448	\$122,342	\$211,412	\$343,585	\$358,207	\$389,314
Respirator Fit-Testing	\$11,408	\$14,361	\$3,515	. \$3,515	\$3,946	\$4,072
Respirator Protection	\$4,133	\$5,726	\$12,013	\$14,908	\$16,100	\$17,051
Personal Protective Equipment						
Establishments that do not supply protective work clothing and equipment in the baseline	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639	\$4,639
Establishments that supply protective work clothing and equipment in the baseline but have employees pay	\$324	\$324	\$324	\$324	\$324	\$324
Hygiene Areas and Practices						•
If install showers and change rooms	\$13,769	\$13,769	[.] \$13,769	\$13,769	\$13,769	\$11,547
if install handwashing facilities and change rooms	\$1,959	\$1,959	\$1,959	\$1,959	\$1,959	\$1,923
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$8,942	\$8,942	\$8,942	\$8,942	\$8,942	\$8,942
Medical Surveillance	\$0	\$0	\$0	\$0	\$0	\$0
Communication of Chromium (VI) Hazards to Employees	\$467	\$467	\$467	\$467	\$467	\$467
Recordkeeping	\$209	\$209	\$209	\$209	\$209	\$209
Total Non-Annualized Cost in the Second through Tenth Year to Achieve Alternative PEL	· .					
If Install showers and change rooms	\$117,376	\$165,817	\$250,326	\$385,394	\$401,640	\$431,603
if install handwashing facilities and change rooms	\$105,567	\$154,007	\$238,517	\$373,584	\$389,830	\$421,979

NAICS	Codes	3252	3253	3254	3250	2261

ESTABLISHMENTS	Total	Total Affect			cted Establishments			
	<u>Industry</u>		Number		Percentage			
Establishments with < 20 Employees	6,754		45	(0.67%			
Establishments with ≥ 20 Employees	8,195		92		1.12%			
TOTAL	14,949		137		0.92%			
	,			,	3.0270			
EMPLOYEES	Total		Affected	Empl	ovees			
	Industry		Number		Percentage			
Establishments with < 20 Employees	53,786		358		0.67%			
Establishments with ≥ 20 Employees	883,749		9.921	- 1	1.12%			
TOTAL	937.535		10.280		1.10%			
	,		.0,200		1.10%			
REVENUES	Total		Affected	d Dave				
	Industry		Total		Establishment			
Establishments with < 20 Employees	\$ 7.043.513.602	\$	46,928,948	S		per Enterprise		
Establishments with ≥ 20 Employees					1,042,866			
TOTAL	\$ 115,730,824,041		1,299,235,609		14,122,126			
IUIAL	\$ 122,774,337,643	. \$	1,346,164,556	\$	9,826,019	\$12,943,890		
PROFITS			Affect	ed Pro	fits			
	Rate		Total	per	Establishment	per Enterprise		
Establishments < 20	5.12%	\$	2,402,293	s—	53,384			
Establishments ≥ 20	5.12%	Š	66,507,871	Š	722,912			
TOTAL	5.12%	Š	68,910,164	š	502,994	\$662,598		
		•	00,010,107	•	302,337	\$002,350		
ENTERPRISES & ESTABLISHMENTS,	BY Affects	ed		Affect	ted			
ENTERPRISE & ESTABLISHMENT SIZ	E Enterpri	Ses	Es		ments			
Small Business / < 20 Employees	49		24		43			
Small Business / ≥ 20 Employees	47				57.			
TOTAL SMALL	96				00 27			
		,		'				
Large Business / < 20 Employees					2			
Large Business / ≥ 20 Employees					35			
TOTAL LARGE		3			37			
TOTAL	` 104			4	37			
	10-	•		•	31			
REVENUE & PROFITS, BY								
ENTERPRISE & ESTABLISHMENT SIZ	E				4.			
Small Business / < 20 Employees				Profi				
Small Business / > 20 Employees		43,21			,295,524			
	\$ 804,9	<u>61,19</u>	<u> </u>	41	,205,963			
SUBTOTAL SMALL	\$ 849,8	04,40	9 \$	43	,501,488			
Large Business / < 20 Employees	\$ 2.0	85.73	1 \$		106,769			
Large Business / > 20 Employees	\$ 494,2			25	i,301,907			
SUBTOTAL LARGE	\$ 496,3	_						
					,408,676			

impacts on Plastic Colorant Producers and Users

BASELINE VALUES	Revenue	Profits	
Smail Businesses	Total per Business Tota \$ 849,804,409 \$8,852,129 \$ 43,50		
Large Businesses	\$ 496,360,147 \$ 25,40		
All Businesses	\$ 1,346,164,556 \$ 68,910		
	+ 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	3.12%	
PEL = 20 ug/m3	Compliance Costs	Profit Rate	Small Establishments
	Total per Business % Revenue	% Profits After Costs	Total Per Estab. % Revenue % Profit
Small Businesses	\$ 393,599 \$ 4,100 0.05%	0.90% 5.07%	\$139,832 \$3,107 0.30% 5.82%
Large Businesses	\$ 165,853 <u>0.03%</u>	0.65% 5.09%	
All Businesses	\$ 559,452 \$ 5,379 0.04%	0.81% 5.08%	
PEL = 10 ug/m3	Compliance Costs	Profit Rate	Small Establishments
	Total per Business % Revenue	% Profits After Costs	Total Per Estab. % Revenue % Profit
Small Businesses	\$ 536,726 \$ 5,591 0.06%	1.23% 5.06%	\$188,442 \$4,188 0.40% 7.84%
Large Businesses	\$ 227,376 <u>0.05%</u>	0.89% 5.07%	
All Businesses	\$ 764,102 \$ 7,347 0.06%	1.11% 5.06%	
PEL = 5.0 ug/m3	Compliance Costs	Profit Rate	Small Establishments
		% Profits After Costs	Total Per Estab. % Revenue % Profit
Small Businesses	\$ 873,088 \$ 9,095 0.10%	2.01% 5.02%	\$273,181 \$6,071 0.58% 11.37%
Large Businesses	\$ 387,960 0.08%	1.53% 5.04%	
All Businesses	\$1,261,048 \$ 12,125 0.09%	1.83% 5.03%	
PEL = 1.0 ug/m3	Compliance Costs	Profit Rate	Small Establishments
		% Profits After Costs	Total Per Estab. % Revenue % Profit
Small Businesses	\$1,258,518 \$ 13,110 0.15%	2.89% 4.97%	\$409,082 \$9,091 0.87% 17.03%
Large Businesses	\$ 550,929 0.11%	2.17% 5.01%	
All Businesses	\$1,809,447 \$ 17,399 0.13%	2.63% 4.98%	•
PEL = 0.5 ug/m3	Compliance Costs	Profit Rate	Small Establishments
-		% Profits After Costs	Total Per Estab. % Revenue % Profit
Small Businesses	\$1,320,260 \$ 13,753 0.16%	3.03% 4.96%	\$425,505 \$9,456 0.91% 17.71%
Large Businesses	\$ 579,935 0.12%	2.28% 5.00%	
All Businesses	\$1,900,195 \$ 18,271 0.14%	2.76% 4.98%	
PEL = 0.25 ug/m3	Compliance Costs	Profit Rate	Small Establishments
		% Profits After Costs	Total Per Estab. % Revenue % Profit
Small Businesses	\$1,558,730 \$ 16,237 0.18%	3.58% 4.94%	\$454,708 \$10,105 0.97% 18.93%
Large Businesses	\$ 710,527 0.14%	2.80% 4.98%	
All Businesses	\$2,269,257 \$ 21,820 0.17%	3.29% 4.95%	

^{*} Source of Data on Revenue and Profit Rate: I.R.S., Corporation Source Book of Statistics of Income, 2000